



MODEL G0600
20" x 60" BIG BORE LATHE
OWNER'S MANUAL
(For models manufactured since 7/11)



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**

#CR9070 PRINTED IN CHINA



WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

Foreword

We are proud to offer the Model G0600 20" x 60" Big Bore Lathe. This machine is part of a growing Grizzly family of fine metalworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

We are pleased to provide this manual with the Model G0600. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

The specifications, drawings, and photographs illustrated in this manual represent the Model G0600 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.
c/o Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

We stand behind our machines. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL G0600 20" X 60" 3-PHASE BIG BORE METAL LATHE

Product Dimensions:

Weight..... 5071 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 110-3/4 x 45-1/4 x 51 in.
Footprint (Length x Width)..... 109-1/4 x 24-3/4 in.

Shipping Dimensions:

Type..... Not Available
Content..... Machine
Weight..... 5758 lbs.
Length x Width x Height..... 114 x 44 x 63 in.

Electrical:

Minimum Circuit Size..... 40 amp
Switch..... Magnetic with Thermal Overload Protector
Switch Voltage..... 220V
Plug Included..... No
Recommended Phase Converter..... H3741

Motors:

Spindle

Type..... TEFC Induction
Horsepower..... 10 HP
Voltage..... 220V
Prewired..... 220V
Phase..... Three
Amps..... 28A
Speed..... 1725 RPM
Cycle..... 60 Hz
Number of Speeds..... 1
Power Transfer Belt and Gearbox
Bearings..... Shielded and Lubricated

Coolant

Type..... TEFC Induction
Horsepower..... 1/8 HP
Voltage..... 220V
Prewired..... 220V
Phase..... Three
Amps..... 0.6A
Speed..... 3450 RPM
Cycle..... 60 Hz
Number of Speeds..... 1
Power Transfer Direct Drive
Bearings..... Shielded and Lubricated



Main Specifications:

Operation Info

| | |
|-------------------------------|--------------|
| Swing Over Bed..... | 20 in. |
| Distance Between Centers..... | 60 in. |
| Swing Over Cross Slide..... | 12 in. |
| Swing Over Saddle..... | 12 in. |
| Swing Over Gap..... | 29 in. |
| Maximum Tool Bit Size..... | 1 in. |
| Compound Travel..... | 5 in. |
| Carriage Travel..... | 56-11/16 in. |
| Cross Slide Travel..... | 12-3/4 in. |

Headstock Info

| | |
|--------------------------------------|----------------|
| Spindle Bore..... | 3-1/8 in. |
| Spindle Taper..... | MT#7 |
| Number of Spindle Speeds..... | 12 |
| Spindle Speeds..... | 25 - 1600 RPM |
| Spindle Type..... | D1-8 Camlock |
| Spindle Bearings..... | Tapered Roller |
| Spindle Length..... | 29-1/4 in. |
| Spindle Length with 3-Jaw Chuck..... | 25-3/4 in. |
| Spindle Length with 4-Jaw Chuck..... | 24-7/8 in. |

Tailstock Info

| | |
|--------------------------------|-------|
| Tailstock Quill Travel..... | 6 in. |
| Tailstock Taper..... | MT#5 |
| Tailstock Barrel Diameter..... | 3 in. |

Threading Info

| | |
|-----------------------------------|----------------------------|
| Number of Longitudinal Feeds..... | 35 |
| Range of Longitudinal Feeds..... | 0.0022 - 0.0612 in. |
| Number of Cross Feeds..... | 35 |
| Range of Cross Feeds..... | 0.00048 - 0.01354 in./rev. |
| Number of Inch Threads..... | 60 |
| Range of Inch Threads..... | 2 - 112 TPI |
| Number of Metric Threads..... | 47 |
| Range of Metric Threads..... | 0.2 - 14 mm |
| Number of Modular Pitches..... | 39 |
| Range of Modular Pitches..... | 0.1 - 7 MP |
| Number of Diametral Pitches..... | 50 |
| Range of Diametral Pitches..... | 4 - 112 DP |

Dimensions

| | |
|---------------------------------|-----------------|
| Bed Width..... | 13-3/4 in. |
| Leadscrew Diameter..... | 1-9/16 in. |
| Leadscrew TPI..... | 4 |
| Leadscrew Length..... | 84-7/8 in. |
| Steady Rest Capacity..... | 3/4 - 6-1/2 in. |
| Follow Rest Capacity..... | 5/8 - 3-3/4 in. |
| Faceplate Size..... | 17-3/4 in. |
| Feed Rod Diameter..... | 15/16 in. |
| Floor to Center Height..... | 44-5/8 in. |
| Height With Leveling Jacks..... | 53 in. |



Construction

| | |
|----------------------|---------------------------|
| Base..... | Cast Iron |
| Headstock..... | Cast Iron |
| Headstock Gears..... | Flame Hardened Cast Iron |
| Bed..... | Hardened Ground Cast Iron |
| Body..... | Cast Iron |
| Stand..... | Cast Iron |
| Paint..... | Powder Coated |

Other Specifications:

| | |
|------------------------------|------------------|
| Country Of Origin | China |
| Warranty | 1 Year |
| Serial Number Location | Machine ID Label |
| Assembly Time | 1 hour |

Features:

Hardened and Precision Ground Meehanite Bed Casting
Universal Quick Change Gear Box for Inch and Metric Threads, Plus Modular and Diametral Pitches
Hardened and Precision Ground Headstock, Quick Change and Apron Gears Run in an Oil Bath
Adjustable Apron Clutch
One Piece Heavy Cast Iron Base
Coolant System
Halogen Lamp
Foot Brake
Thread Chasing Dial
4-Position Auto Apron Stop
One Shot Lubrication on Apron
Full Length Splash Guard
Dual Inch/Metric Dials
Rollers Inside Steady Rest
Headstock Internal Oil Pump and Oil Director Distribution Pipes
Spindle Balance Counterweight System
Two Piece Chuck Jaws

Accessories Included:

#5 - #7 Morse Taper Sleeve
12" 3-Jaw Chuck
14" 4-Jaw Chuck
17-3/4" Face Plate
Centers
Follow Rest
Leveling Pads
Quick Change Tool Post and Holder
Service Tools
Steady Rest
Tool Box



Identification

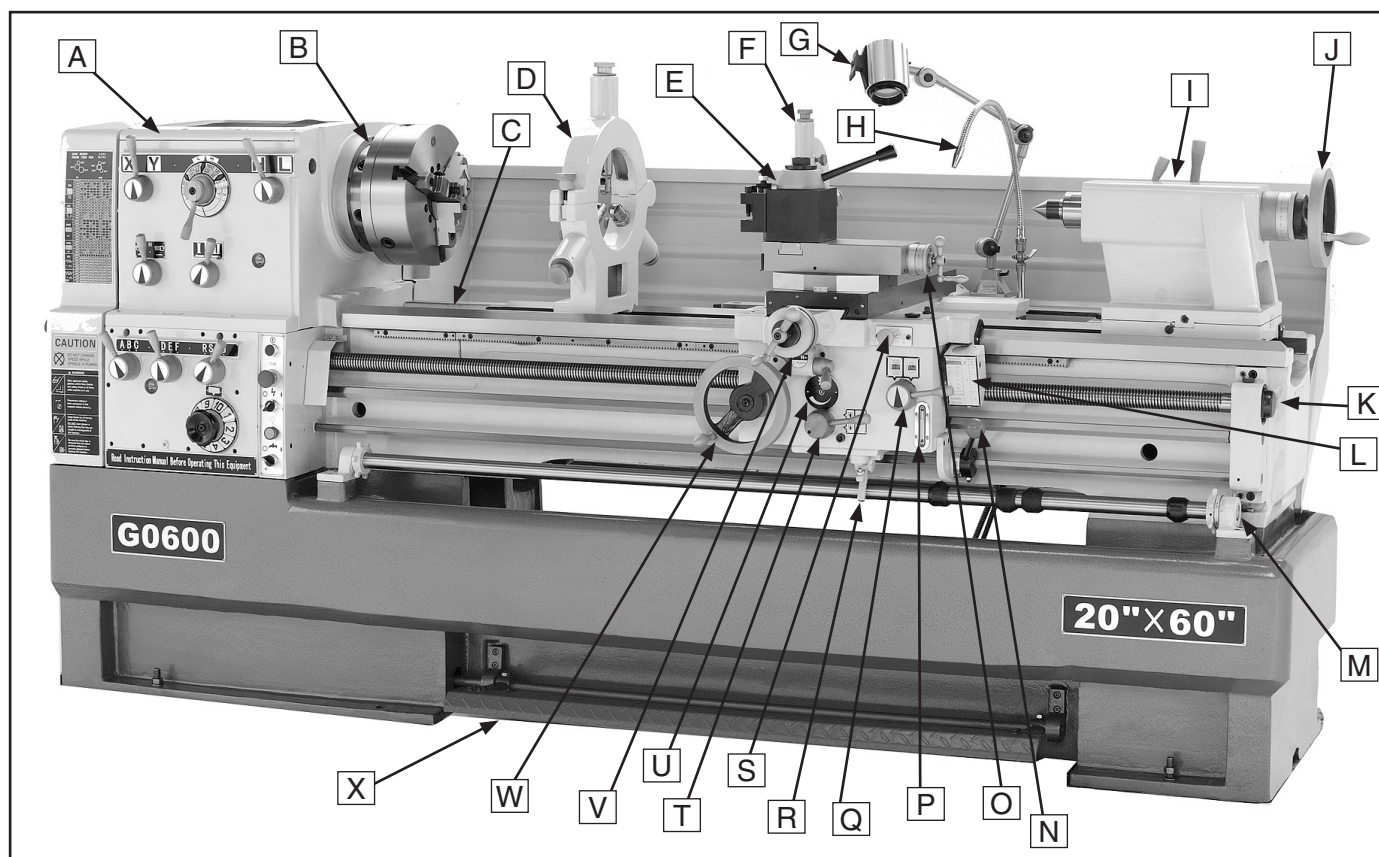


Figure 1. The Model G0600 20" x 60" Big Bore Lathe.

- | | |
|--|--|
| A. Headstock | M. 4-Position Apron Stop Dial |
| B. D1-8 Camlock MT#7 Spindle | N. Spindle Rotation ON/OFF Lever |
| C. Gap Piece | O. Compound Rest Handwheel |
| D. Ball Bearing Style Steady Rest | P. Apron Oil Level Sight Glass |
| E. Quick Change Tool Holder | Q. Halfnut Lever |
| F. Follow Rest | R. Apron Release Arm |
| G. Work Lamp | S. Manual Oil Pump |
| H. Universal Coolant Nozzle | T. Feed Clutch Lever |
| I. Tailstock | U. Feed Clutch Tension Adjustment |
| J. Tailstock Handwheel | V. Cross Slide Handwheel |
| K. Leadscrew Rod Endcap Housing | W. Apron Handwheel |
| L. Thread Dial | X. Brake Pedal |



Headstock Controls

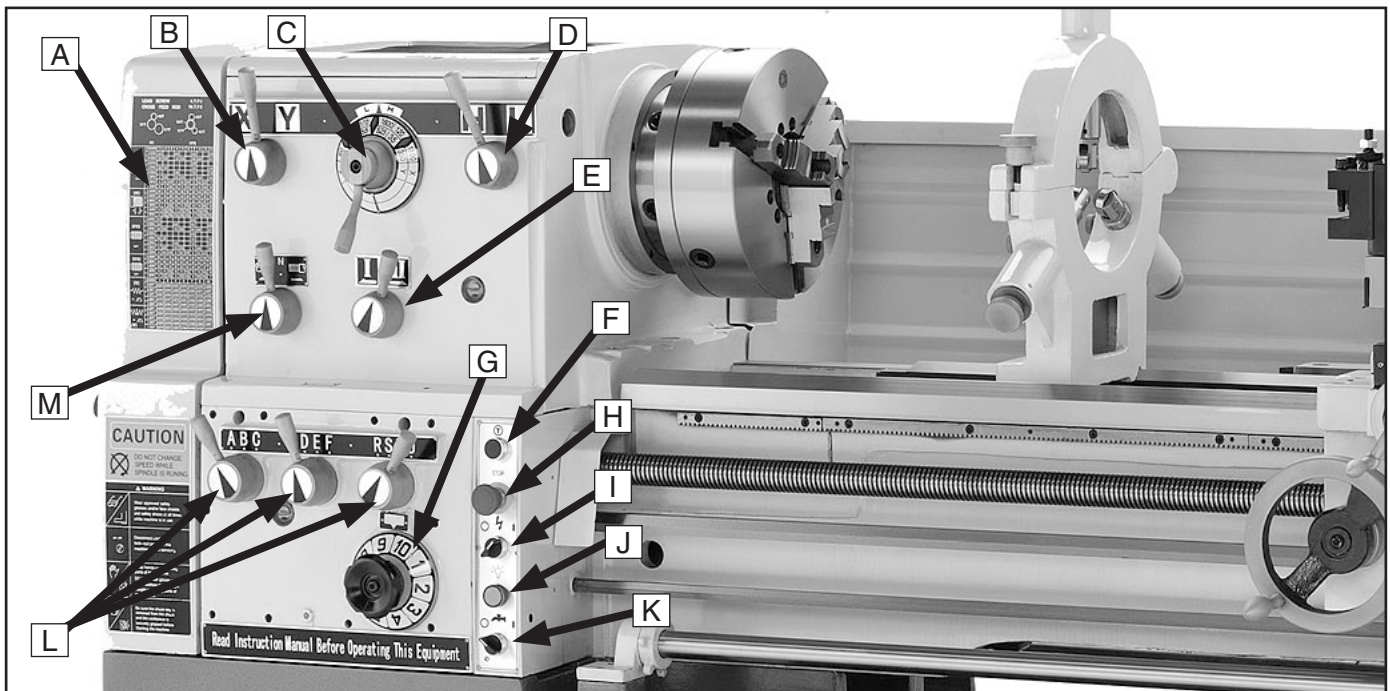


Figure 2. Headstock and gearbox controls.

- A. Cutting Chart:** Used for shifting the lathe headstock and gearbox into the proper gear combinations for threading and feeding operations.
- B. Range Splitting Lever:** Used to select the final spindle speed from the set of high or low range speeds selected by the range lever.
- C. Spindle Speed Dial:** Positions the headstock gears in one of three speed modes. In each mode, there are four spindle speeds. The four speed choices are two speeds in low range, and two speeds in high range. The range lever selects high or low range, and the range splitting lever selects one of the two remaining speeds within that range.
- D. Range Lever:** Used to select a set of high or low range spindle speeds from one of the three spindle speed modes shown on the spindle speed dial.
- E. Gearbox Hi/Lo Lever:** This lever puts the gearbox in high or low range and has no effect on spindle RPM. **I** is Hi range, **II** is low range.
- F. Jog Button:** Turns the spindle motor **ON** while being pressed and held.
- G. Feed/Lead Dial:** Used for setting up feed or threading gearing ratios in conjunction with quick change gearbox levers.
- H. Emergency Stop Button:** Stops all machine functions. Twist clockwise to reset.
- I. Lathe Power Switch:** Turns power **ON/OFF** to the lathe so lathe operations can begin.
- J. Power Light:** Indicates the lathe is energized when illuminated.
- K. Coolant Pump Switch:** Turns coolant pump **ON/OFF**.
- L. Quick Change Gearbox Levers:** Moves the gearbox gears into particular ratios, which then turn the leadscrew and feedrod for threading and power feed operations.
- M. Leadscrew/Feedrod Direction Lever:** Changes the rotation direction of the leadscrew or feedrod so apron or cross feed will move the opposite direction.



SECTION 1: SAFETY

WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

WARNING

Safety Instructions for Machinery

OWNER'S MANUAL. Read and understand this owner's manual **BEFORE** using machine. Untrained users can be seriously hurt.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery. to reduce the risk of eye injury or blindness from flying particles Everyday eyeglasses are not approved safety glasses.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

MENTAL ALERTNESS. Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.



WARNING

Safety Instructions for Machinery

DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.

INTENDED USE. Only use the machine for its intended purpose and only use recommended accessories. Never stand on machine, modify it for an alternative use, or outfit it with non-approved accessories.

STABLE MACHINE. Unexpected movement during operations greatly increases the risk of injury and loss of control. Verify machines are stable/secure and mobile bases (if used) are locked before starting.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

REMOVING TOOLS. Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

DANGEROUS ENVIRONMENTS. Do not use machinery in wet locations, cluttered areas, around flammables, or in poorly-lit areas. Keep work area clean, dry, and well lighted to minimize risk of injury.

APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

CHILDREN & BYSTANDERS. Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.

FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.

SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.

UNATTENDED OPERATION. Never leave machine running while unattended. Turn machine **OFF** and ensure all moving parts completely stop before walking away.

MAINTENANCE & INSPECTION. A machine that is not properly maintained may operate unpredictably. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. Regularly inspect machine for loose bolts, alignment of critical parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged or mis-adjusted parts before operating machine.

EXPERIENCING DIFFICULTIES. If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support Department at (570) 546-9663.



WARNING

Additional Safety for Metal Lathes

1. **READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS MACHINE. YOUR SAFETY AND THE PROPER USE OF THIS MACHINE IS YOUR RESPONSIBILITY.**
2. **CLEARING CHIPS.** Do not clear chips by hand or while the lathe is turning.
3. **CHUCK KEY SAFETY.** Always remove chuck key. Never walk away from the lathe with the key in the chuck.
4. **TOOL SELECTION.** Always select the right cutter for the job, and make sure they are sharp. The right tool decreases strain on the lathe components and provides a better finish.
5. **SECURING THE WORKPIECE.** Make sure workpiece is properly held in chuck before starting lathe. A workpiece thrown from the chuck may cause severe injury to yourself or others.
6. **CHANGING GEARS.** Turn lathe **OFF** before changing speeds. The spindle must be brought to a complete stop before changing gears.
7. **SUPPORT LONG STOCK.** Stock extending beyond the headstock **MUST** be supported. Unsupported stock will begin to whip and cause serious injury to operator/ bystanders and cause damage to the lathe. Always turn supported long stock at slow RPM's.
8. **PINCH HAZARDS.** Protect your hands and the precision ground ways. Always use a chuck cradle or piece of plywood over the ways of the lathe when servicing chucks.
9. **LATHE MAINTENANCE.** Never operate the lathe with damaged or worn parts. Maintain your lathe in proper working condition. Perform routine inspections and maintenance promptly when needed. Put away adjustment tools after use.
10. **SAFETY CLEARANCES.** Make sure workpiece has adequate clearance before starting machine. Check tool and tool post clearance, chuck clearance, and saddle clearance before starting the lathe.
11. **RATES.** Always use the appropriate feed and speed rates.
12. **STOPPING LATHE.** Never attempt to slow or stop the lathe chuck by using your hand.
13. **ATTENDANCE.** Never walk away from the lathe while it is running. An unsupervised lathe that is running invites accidents.
14. **LONG HAIR.** Tie up long hair. Long hair poses a risk of entanglement with moving parts.
15. **AUTOMATIC FEEDS.** Release any automatic feeds after completing a job.
16. **TURNING SPEEDS.** Select the turning speed appropriate for the type of work, material, and tool bit. Allow the lathe to gain full speed before beginning a cut.
17. **MOTOR DIRECTION.** Never reverse motor direction while the lathe is in motion.
18. **GUARDS.** Make sure all guards are in place and working properly.
19. **TOOL POST CLEARANCE.** Adjust tool post to provide proper support for the turning tool you will be using. Test tool post clearance by rotating workpiece by hand before turning lathe **ON**.
20. **CRASHES.** Make sure no part of the tool, tool holder, compound slide, cross slide, or carriage will contact the chuck during operation.



Glossary of Terms

The following is a list of common definitions, terms and phrases used throughout this manual as they relate to this lathe and metalworking in general. Become familiar with these terms for assembling, adjusting or operating this machine. Your safety is VERY important to us at Grizzly!

Arbor: A machine shaft that supports a cutting tool.

Backlash: Wear in a screw or gear mechanism that may result in slippage, vibration and loss of tolerance.

Collet: A conical shaped split-sleeve bushing that holds round or rectangular tool and/or workpieces by their outside diameter.

Cross slide: Movement of cutting tool across the end of the workpiece.

Cross Slide: A fixture attached to the lathe carriage that holds the compound rest and can be moved in and out.

Cutting Speed: The distance a point on a cutter moves in one minute, expressed in meters or feet per minute.

Dial Indicator: An instrument used in setup and inspection work that shows on the amount of error in size or alignment of a part.

Facing: In lathe work, cutting across the end of a workpiece, usually to machine a flat surface.

Feed: The movement of a cutting tool into a workpiece.

Fixture: A device that securely holds the workpiece in place during cutting operation as opposed to a **Jig** which is used to hold and guide a workpiece through an operation.

Gib: A tapered wedge located along a sliding member to take up wear or to ensure a proper fit.

Headstock: The major lathe component that houses the spindle and motor drive system to turn the workpiece.

Lathe Center: A lathe accessory with a 60° point which is inserted into the headstock or tailstock of the lathe and is used to support the workpiece.

Leadscrew: The long screw that is driven by the end gears and supplies power to the carriage.

Spindle: The revolving shaft that holds and drives the workpiece or cutting tool.

Tailstock: A moveable fixture opposite of the headstock on a lathe that has a spindle used to support one end of a workpiece and for holding tools.

Toolpost: The part of the compound rest that holds the tool holder.

Turret: A machine fixture that holds multiple tools and can be revolved and indexed to position.

Ways: The precision machined and flat tracks on a lathe on which the carriage and tailstock slide.



SECTION 2: CIRCUIT REQUIREMENTS

220V 3-Phase Operation

WARNING

Serious personal injury could occur if you connect the machine to the power source before you have completed the set up process. **DO NOT** connect the machine to the power source until instructed to do so.

Full Load Amperage Draw

G0600 10 HP 220V 3-Phase.....28 Amps

Circuit Requirements

We recommend connecting your machine to a dedicated and grounded circuit that is rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

Minimum Circuit.....40 Amp

220V Connection Type

For 220V 3-phase connection of this lathe, we recommend hardwiring your machine to a power supply box with a safety shutoff. A qualified electrician should determine the best cord to use in your environment.



G0600 220V 3-Phase.....Hardwire

Grounding

In the event of an electrical short, grounding reduces the risk of electric shock. The grounding wire in the power cord must be properly connected to the grounding prong on the plug; likewise, the outlet must be properly installed and grounded. All electrical connections must be made in accordance with local codes and ordinances.

Extension Cords

We do not recommend the use of extension cords. Instead, arrange the placement of your equipment and the installed wiring to eliminate the need for extension cords.

| | |
|---|--|
|  | <h3> WARNING</h3> <p>Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!</p> |
|---|--|

Phase Converter

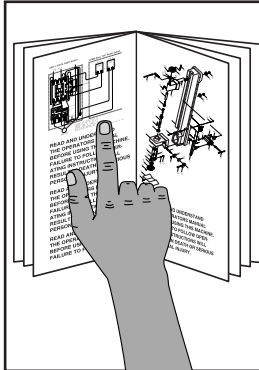
If your lathe is connected to a phase converter for 3-phase power, the power from the manufactured power leg (sometimes called the wild wire or manufactured leg) can fluctuate.

Make sure that when you connect the lathe to the phase converter that you connect the "Wild Wire" or the "Manufactured Leg" from the phase converter to the lathe input lead L3. Otherwise, your lathe may not start properly, and magnetic switch chatter and transformer damage will occur.



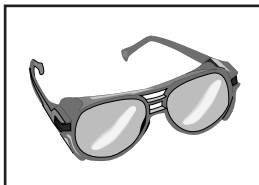
SECTION 3: SETUP

Setup Safety



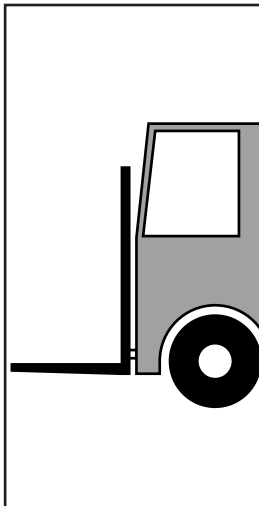
!WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



!WARNING

Wear safety glasses during the entire setup process!



!WARNING

The Model G0600 is an extremely heavy machine. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.

Items Needed for Setup

The following items are needed to complete the setup process, but are not included with your machine:

| Description | Qty |
|---|-----|
| • Fork Lift or Crane (5000 lb capacity) | 1 |
| • Lifting Straps (5000 lb capacity each)..... | 2 |
| • Safety Glasses (for each person) | 1 |
| • Helper for Moving..... | 1 |
| • Solvent for Cleaning..... | 1 |
| • Shop Rags for Cleaning..... | 1 |

Unpacking

The Model G0600 was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, you should inventory the contents.



Inventory

In the event that any nonproprietary parts are missing (e.g. a nut or a washer), we would be glad to replace them, or for the sake of expediency, replacements can be obtained at your local hardware store.

After you have inspected your lathe and all the parts have been removed from the crate, you should have the following items:

| Major Inventory 1: (Figure 3) | Qty |
|--|-----|
| A. Steady Rest Assembly | 1 |
| B. 18" Faceplate | 1 |
| C. 12" Three Jaw Chuck (On Lathe)..... | 1 |
| D. 14" Four Jaw Chuck..... | 1 |
| E. Four-Jaw Chuck Lifting Eye | 1 |
| F. Four Jaw Chuck Key..... | 1 |
| G. D1-8 Camlock Stud Set..... | 6 |
| H. Quick Change Tool Holders | 2 |
| I. Cast Iron Foot Pads | 6 |
| J. Follow Rest Assembly..... | 1 |

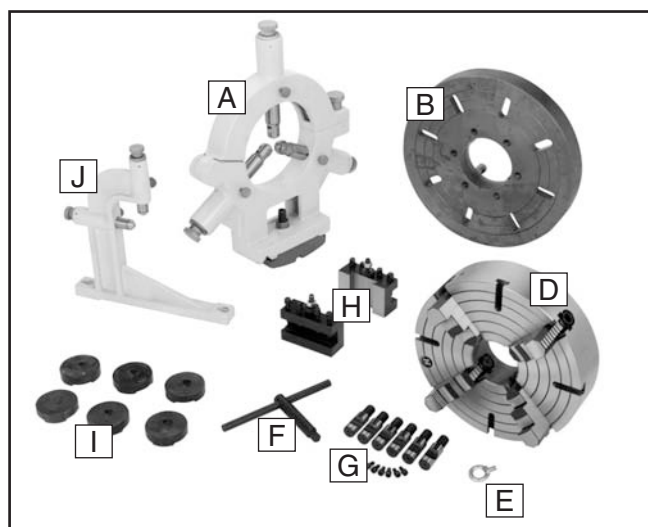


Figure 3. Major item inventory.

| Tool Box Inventory: (Figure 4) | Qty |
|---|------|
| K. Tool Box | 1 |
| L. Oil Bottle..... | 1 |
| M. Carriage Lock and Tool Holder Wrench..... | 1 |
| N. Three-Jaw Chuck Wrench..... | 1 |
| O. Gap Pin Puller | 1 |
| P. Combo Wrench Set 6-30mm..... | 1EA |
| Q. Hex Wrench Set 1.5-10mm..... | 1EA |
| R. #2 Screw Driver Set, Phillips & Flat | 1EA |
| S. MT#5 Dead Centers..... | 2 |
| T. MT#7-5 Tapered Spindle Sleeve | 1 |
| U. 42-Tooth Metric Change Gear | 1 |
| V. 66-Tooth Metric Change Gear | 1 |
| W. Cap Screws M6-1 x 25..... | 3 |
| X. Longitudinal and Cross Feed Handle.... | 1EA |
| Y. Adjustable Foot Pad Studs w/Nuts | 6 |
| Z. Gray and Green Spot Paint..... | 1 EA |

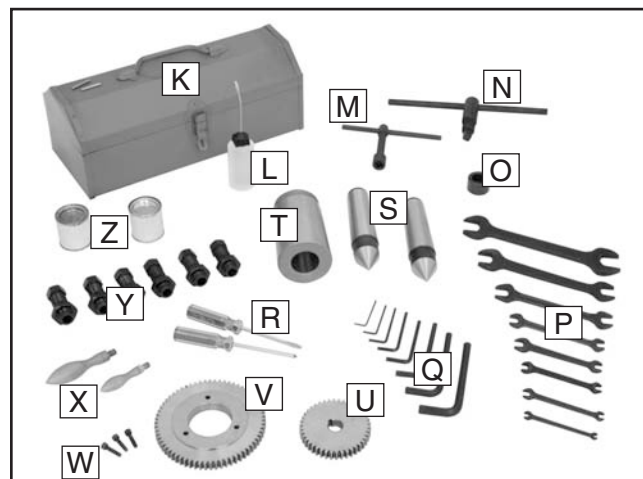


Figure 4. Tool Box Inventory.

NOTICE

Some hardware/fasteners on the inventory list may arrive pre-installed on the machine. Check these locations before assuming that any items from the inventory list are missing.



Hardware Recognition Chart

USE THIS CHART TO MATCH UP
HARDWARE DURING THE ASSEMBLY
PROCESS.

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

○ #10

○ 1/4"

○ 5/16"

○ 3/8"

○ 7/16"

○ 1/2"

○ 4mm

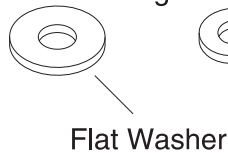
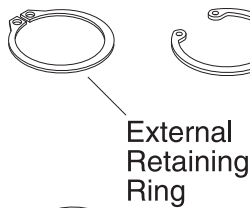
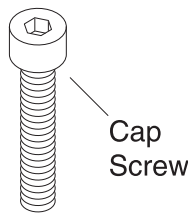
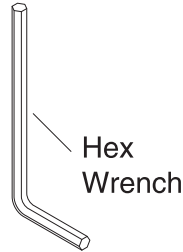
○ 6mm

○ 8mm

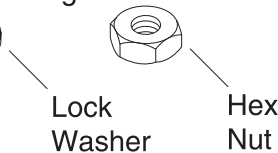
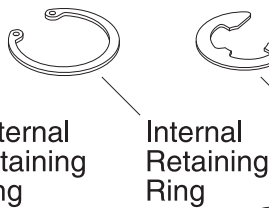
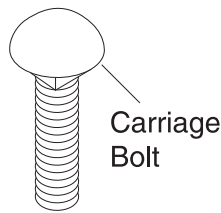
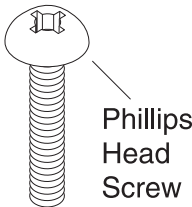
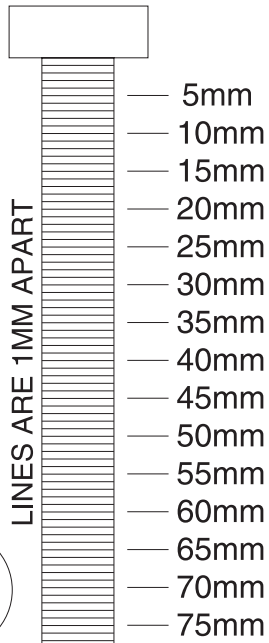
○ 10mm

○ 12mm

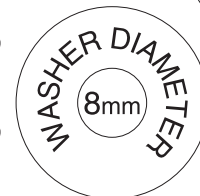
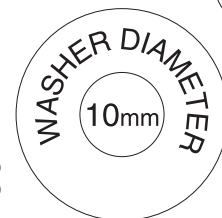
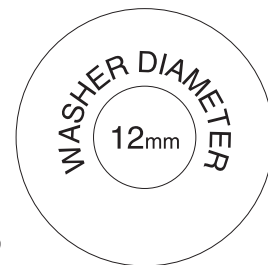
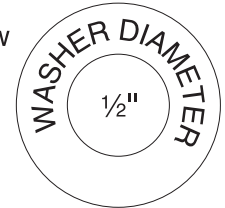
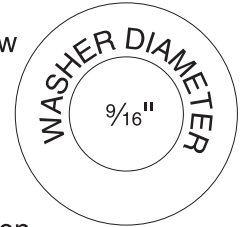
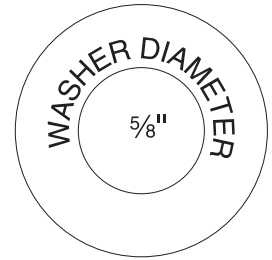
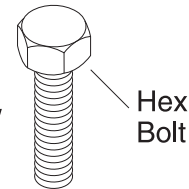
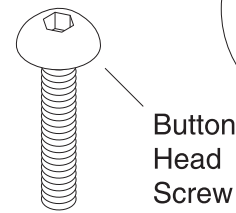
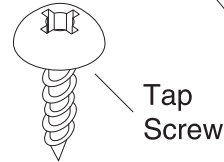
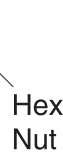
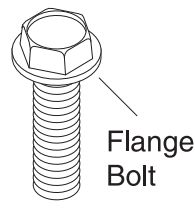
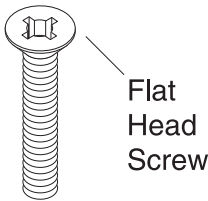
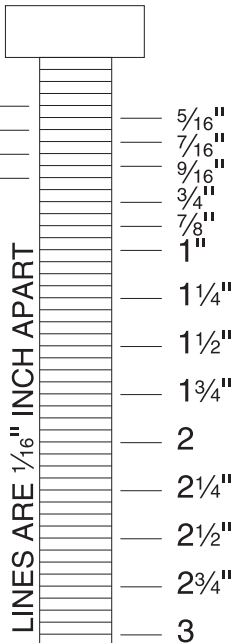
○ 16mm



LINES ARE 1MM APART



LINES ARE 1/16" INCH APART



WASHERS ARE MEASURED BY THE INSIDE DIAMETER



Site Considerations

Floor Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some floors may require additional reinforcement to support both the machine and operator.

Working Clearances

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figure 5** for the minimum working clearances.

| | |
|--|--|
|  | <p>⚠ CAUTION</p> <p>Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and DO NOT allow unsupervised children or visitors in your shop at any time!</p> |
|--|--|

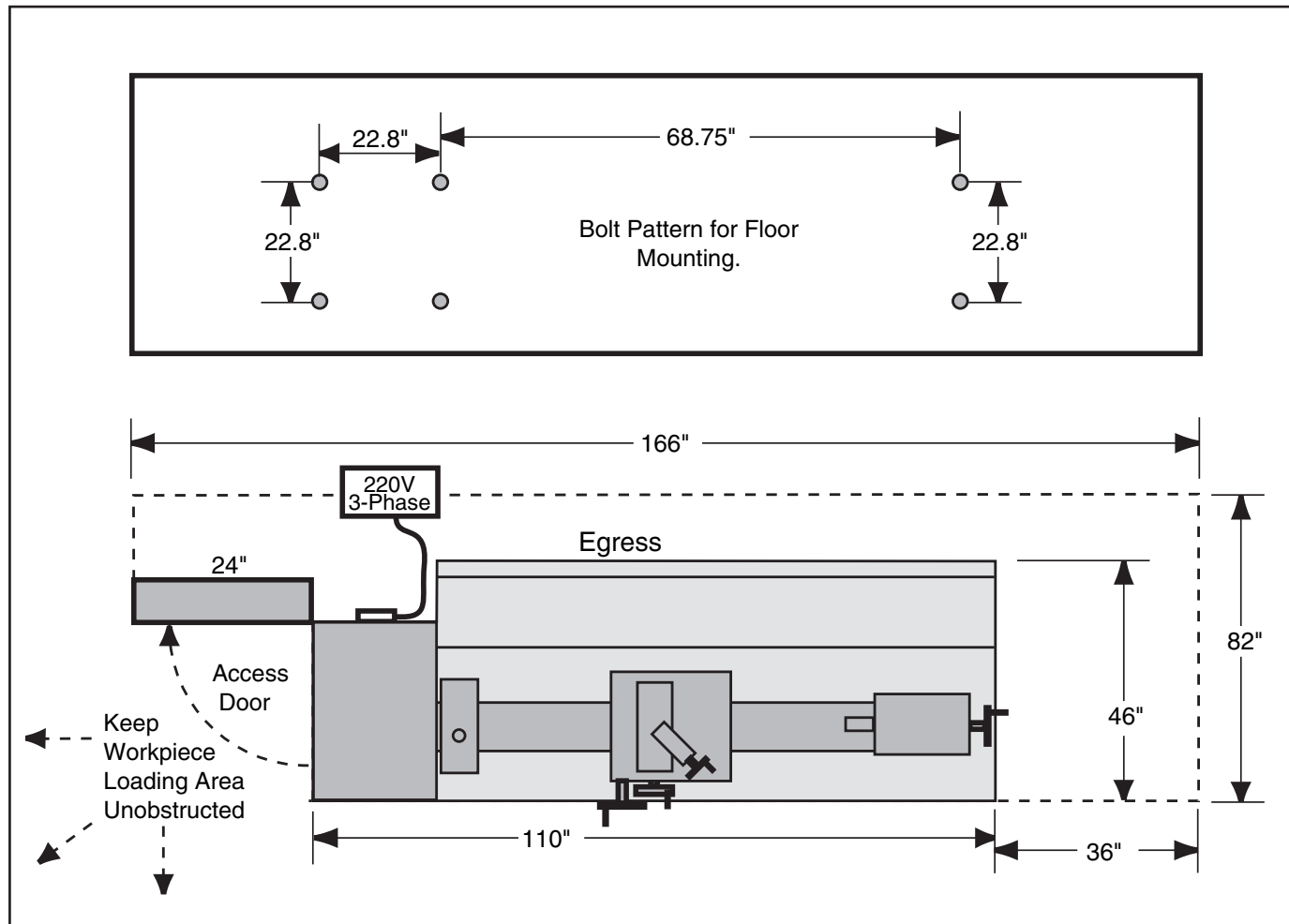
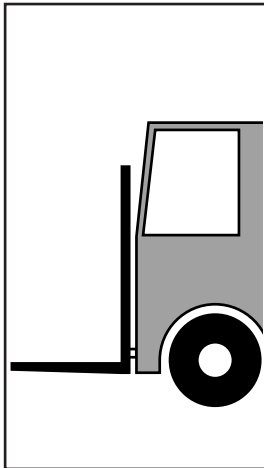


Figure 5. Minimum working clearances.



Lifting & Moving the Lathe



!WARNING

This lathe is an extremely heavy machine. Serious personal injury or death may occur if safe lifting and moving methods are not followed. Seek assistance from a professional rigger if you are unsure about your abilities or maximum load ratings of your lifting equipment.

This lathe can be placed on the included leveling studs and cast-iron feet (**Figure 6**). If the lathe must be secured to the floor refer to a professional machine installer for options. In either case, the lathe must be sitting flat at each mounting point, and the ways must be perfectly level. The bed cannot be twisted or bent. If a misalignment condition arises, shim the lathe where it mounts to the floor, or adjust the feet studs until the bed and ways are in alignment as shown by precision machinist's levels.



Figure 6. Leveling feet and screws.

When lifting, you must move the carriage and tailstock to the right and lock into place as shown in **Figure 7** to provide counter-balance.

Make sure the slings or chains are routed so when the lathe is lifted and the chains or straps are tight, the control rod, lead screw, or feed rod are not bent. Remember, the headstock carries most of the weight of this machine (see **Figure 7**) for safe chain or strap routing and connection.

Double check weight ratings and connections of the lifting system, cables, chains pins, and clevis links before lifting and moving the lathe to your prepared location. Do not attempt to lift or move this lathe if you are unsure about any aspect. Seek assistance from a professional rigger if required.

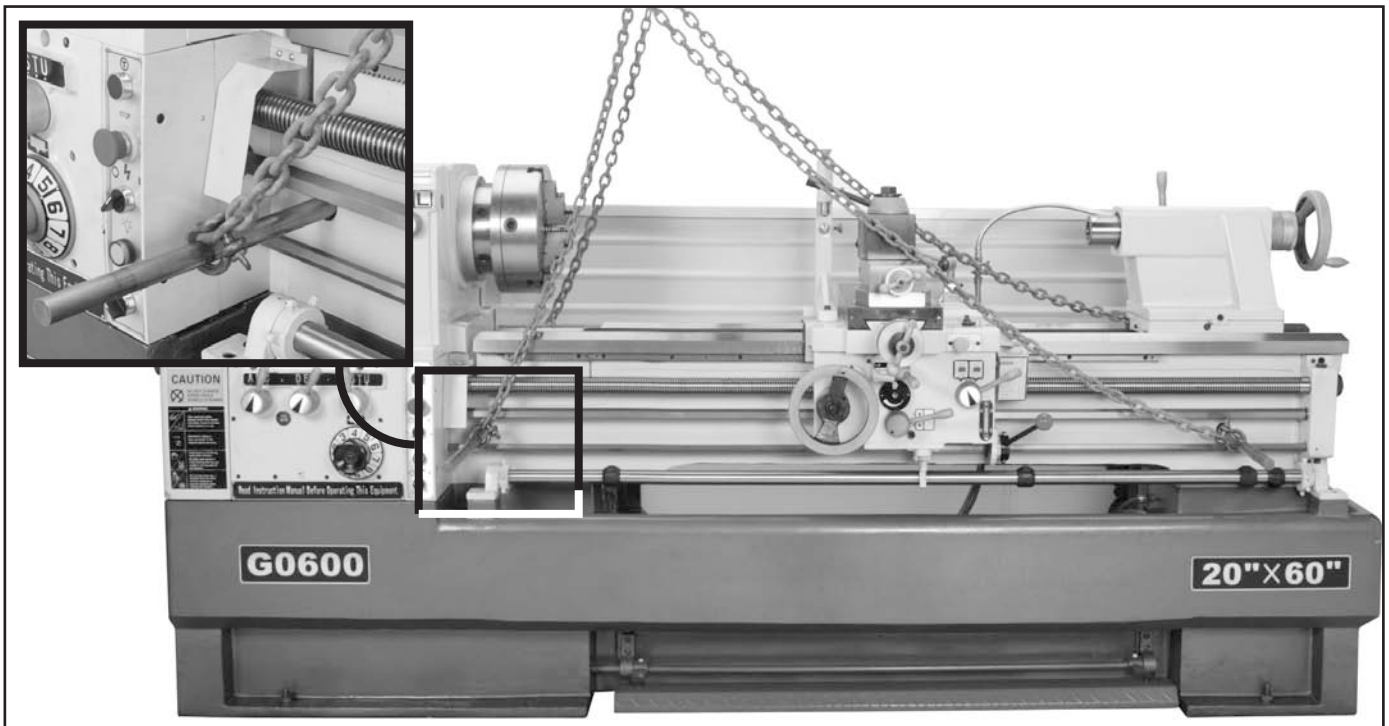



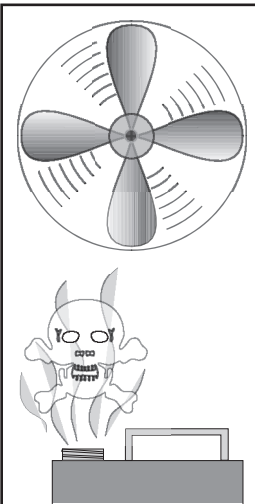
Figure 7. Lifting eye locations for the G0600 lathe.



Cleanup

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser. To clean thoroughly, some parts may need to be removed. **For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

| | |
|--|--|
|  | <p>! WARNING</p> <p>Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.</p> |
|--|--|

| | |
|---|--|
|  | <p>! CAUTION</p> <p>Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well ventilated area.</p> |
|---|--|



Test Run

NOTICE

Check all oil levels and lubrication points before starting lathe. Premature wear will result on moving parts not lubricated!

Once you have read this manual and taken all safety precautions, you are ready to complete this test run. If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop running the machine immediately, and refer **Troubleshooting** on **Page 57** for a solution.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To setup the lathe for the test run:

1. DISCONNECT THE LATHE FROM POWER!
2. Make sure that the belts are adjusted (refer to **V-Belt Service** on **Page 63**).
3. Make sure that the brake linkage is adjusted (refer to **Brake and Switch** on **Page 63**).
4. Move the leadscrew/feedrod direction lever to neutral (**Figure 8**).

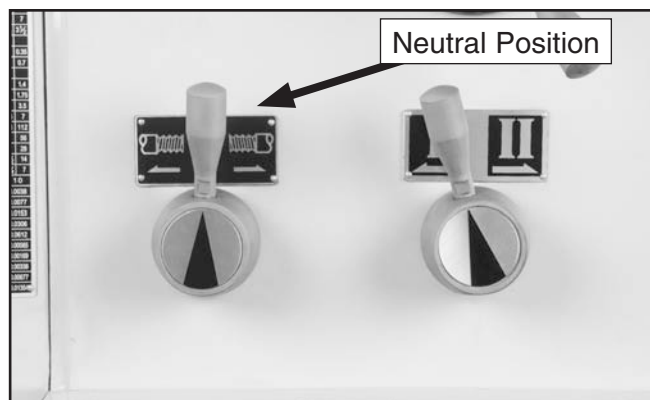


Figure 8. Leadscrew/feedrod direction lever.

5. Make sure that the headstock, gearbox, apron, and lead screw reservoir oil levels are full. Follow all lubrication procedures highlighted in **Lubrication** in the **MAINTENANCE** section on **Page 52** of this manual.

6. Make sure that the chuck and jaws are secure refer to (**Chuck and Faceplate Mounting** on **Page 25** and **Reversing Jaws** on **Page 28**).
7. Fill the coolant pump reservoir, and switch the pump switch to the **OFF** position (refer to **Coolant System** on **Page 56**).
8. Rotate the red EMERGENCY stop switch knob clockwise until it pops out.
9. Disengage the halfnut and the power feed levers (**Figure 9**).

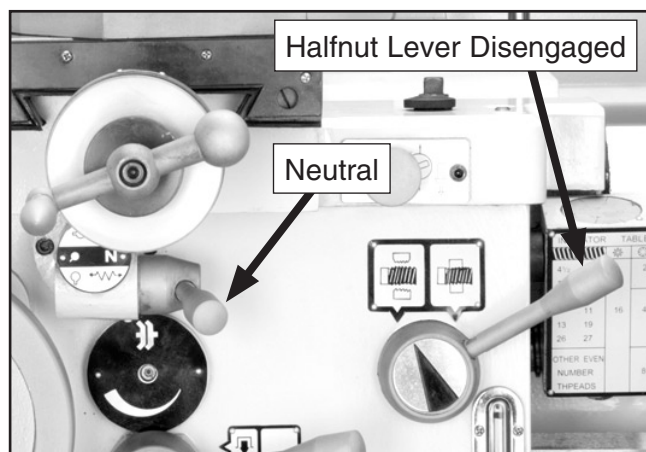


Figure 9. Power feed and halfnut levers.

10. Move the spindle **ON/OFF** lever to the neutral position.
11. At the rear of the headstock, turn the master power switch to the 1 position (**Figure 10**).



Figure 10. Master power switch.



12. Make sure that all bystanders are out of the way, no tools are in the way, and the chuck key is removed from the chuck.
13. Put on safety glasses, tieback longhair, sleeves and loose clothing.
14. Set the lathe to the slowest RPM. Refer to **Spindle Speed** on **Page 36**.

To test run the lathe:

Note: *If any of these tests fail, stop the lathe immediately and refer to the **Troubleshooting** section on **Page 56** for corrections.*

1. Turn the work lamp **ON** and **OFF**.
2. Point the coolant nozzle into the chip pan, turn the pump switch **ON**, make sure coolant flows, and then turn the pump switch **OFF**.
3. Move the spindle ON/OFF lever (**Figure 11**) downward to start the lathe.

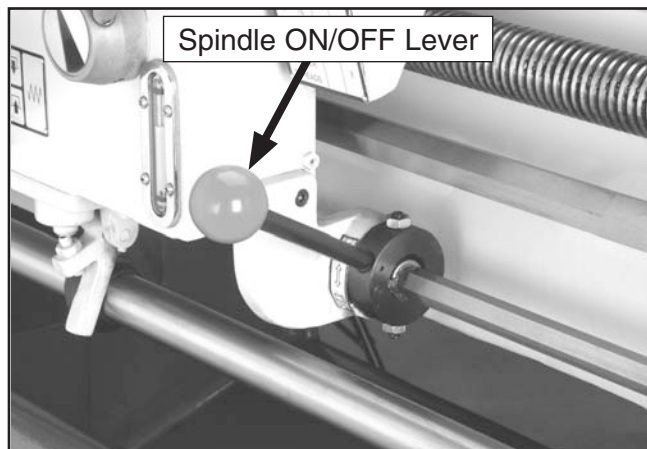


Figure 11. Spindle ON OFF Lever.

4. Observe the oil pump tube sight glass, and make sure oil is being pumped out of the tube as seen through the sight glass (**Figure 12**). If no oil is seen, shut down the lathe immediately.



Figure 12. Oil pump sight glass.

5. Observe the chuck for rotation. It should be rotating toward you at the top. If it is rotating away from you, then you must complete the **Changing Motor Rotation** procedure on **Page 22**. Then repeat the entire **Test Run** procedure.
6. Observe and listen for any abnormal noises or vibration. The lathe should run smoothly with little or no vibration or rubbing noises.
7. Push the foot brake, and the lathe should come to a quick stop. If it has no effect on the lathe, move the spindle ON/OFF lever to the **OFF** position to stop the lathe.
8. Start the lathe again, and push the EMERGENCY Stop switch and the lathe should stop.
9. Complete the **Spindle Brake In** procedure on **Page 23**. The test run is complete.



Changing Motor Rotation

If the chuck turns away from you at the top of the chuck when the spindle lever is in the down position, but all levers are in the correct position for normal spindle rotation, motor rotation must be reversed. By swapping the position of two of the three motor power supply wires.

To change the direction of the motor:

1. DISCONNECT LATHE FROM POWER!
2. Remove the main electrical box cover (**Figure 13**) at the rear of the lathe.

—If your lathe is connected to 220V 3-phase supplied by the power company, swap any two of the 1L1, 1L2, or 1L3 input wires.

—If your lathe is connected to a phase converter for 3-phase power, swap 1L1 and 1L2 input wires (**Figure 13**). 1L3 is part of the transformer input circuit (terminals 21 or 22) and should not be swapped. This is because the "Wild Wire" or the "Manufactured Leg" from the phase converter must NOT be connected to the transformer input circuit or transformer and contactor damage will occur.

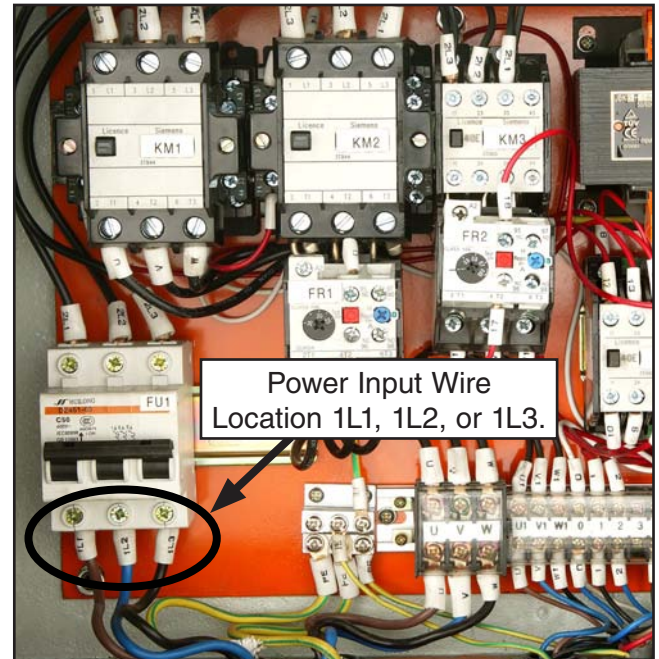
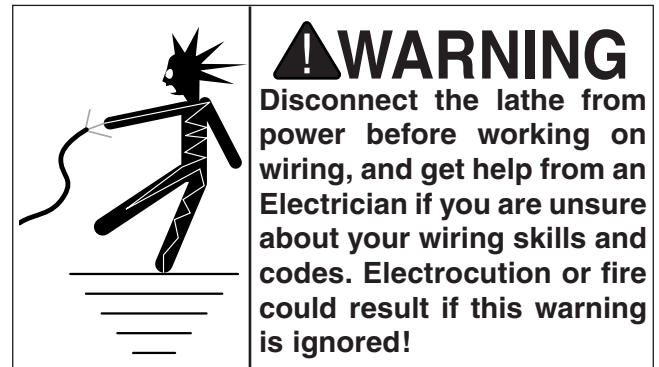


Figure 13. Motor power supply junction block.



Apron and Spindle Break-in

NOTICE

Failure to follow break-in procedures will likely cause rapid deterioration of bearings and other related parts.

It is essential to closely follow the proper break-in procedures to ensure trouble free performance. Complete this process once you have familiarized yourself with all instructions in this manual and completed the test run.

To break-in the spindle:

1. Make sure that the headstock, gearbox, apron, and lead screw and feed rod oil bath oil levels show full. Follow all lubrication procedures highlighted in **Lubrication** in the **MAINTENANCE** section on **Page 52** of this manual.
2. Make sure there are no obstructions around or underneath the chuck and that the chuck is secured to the spindle. Refer to **Chuck and Faceplate Mounting** on **Page 25**.
3. Set the spindle speed to the lowest RPM; refer to section **Setting RPM** on **Page 36**.
4. Move the headstock and gearbox levers so the feedrod and leadscrew are engaged. Refer to section **Using the Thread Cart** on **Page 41** for lever combinations.
5. Make sure that the halfnut lever is disengaged, and that the apron and cross feed lever is in neutral. Refer to section **Power Feed** on **Page 38** for lever combinations.
6. Turn the lathe **ON** and let it run for a minimum of 10 minutes.
7. Turn the lathe **OFF**, shift the levers to the next highest RPM and repeat **Steps 5-6** for each RPM setting in both directions. **DO NOT LEAVE THE AREA!**

Spindle Balancing

After the spindle has been broken in, or if the lathe has been used for a considerable amount of time, you should adjust the spindle weights to minimize spindle vibration.

To minimize spindle vibration:

1. Run the lathe for five minutes on the fastest RPM.
2. **DISCONNECT LATHE FROM POWER!**
3. Open the side cover, loosen the counter weight set screws (**Figure 14**), and reposition one or both counterweights to a new position around the circumference of the spanner nut.
4. Close the side cover, reconnect to power, restart the lathe, and run at 1600 RPM.
5. Place your hand on the headstock cover and feel for harmonic vibration.
6. Repeat **Steps 2** through **5** until any vibration is reduced to its minimum.
7. Now, repeat **Steps 2** through **5** at 1100 RPM until any vibration is reduced to its minimum.

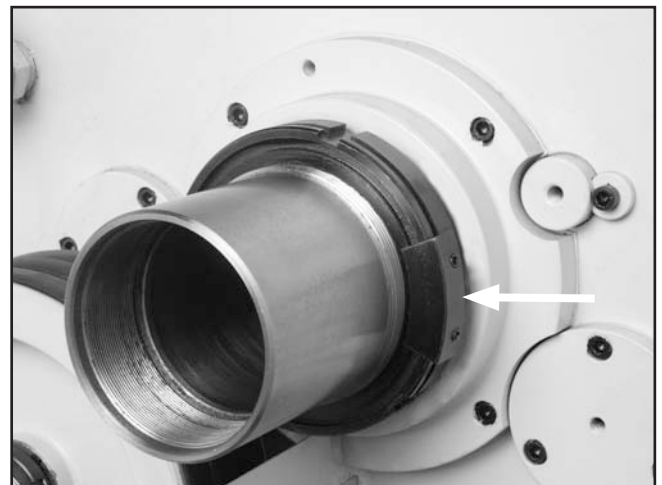


Figure 14. Spindle counterweights.

SECTION 4: OPERATIONS

Operation Safety

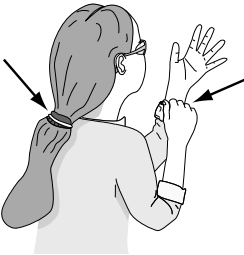
!WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.



!WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.



General

NOTICE

Failure to follow test-run and brake-in procedures will likely cause rapid deterioration of bearings and other related parts.

The Model G0600 will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. **If at any time you are experiencing difficulties performing any operation, stop using the machine!**

If you are an inexperienced operator, we strongly recommend that you read books, trade articles, or seek training from an experienced lathe operator before performing any unfamiliar operations. **Above all, your safety should come first!**



Chuck and Faceplate Mounting

The Model G0600 is shipped with the 3-jaw chuck installed. This is a scroll-type chuck, meaning that all three jaws move in unison when adjusted.

The 4-jaw chuck, on the other hand, features independent jaws. This chuck is used for square or unevenly-shaped stock.

If either chuck cannot hold your workpiece, the cast-iron faceplate has slots for T-bolts that hold standard or custom clamping hardware. With the correct clamping hardware, this faceplate will hold non-cylindrical parts such as castings.

The chucks and faceplate have a D-8 Camlock mount. Please note that there are lines stamped into the cam and on the chuck body. A chuck key is used to turn the locking cams (**Figure 16**) to secure/unsecure the chuck/faceplate.

WARNING

The chuck is heavy and is awkward to handle. Always protect the ways when removing or installing a chuck, and make sure that you make a support cradle (Figure 15), lifting hoist, or that you have an assistant when installing or removing chucks. Ignoring this warning may lead to a severe crushing or amputation injury!

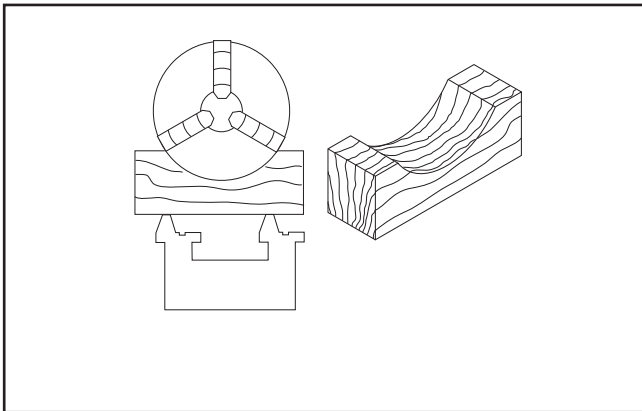


Figure 15. Wooden chuck support cradle.

To remove a chuck or faceplate:

1. DISCONNECT LATHE FROM POWER!
2. Place a piece of plywood across the lathe ways and position it just under the chuck. The board should be at least 8" wide and 10" long.
3. Turn a cam with the chuck key until the cam lock mark aligns with the cam release datum line shown in **Figure 16**.

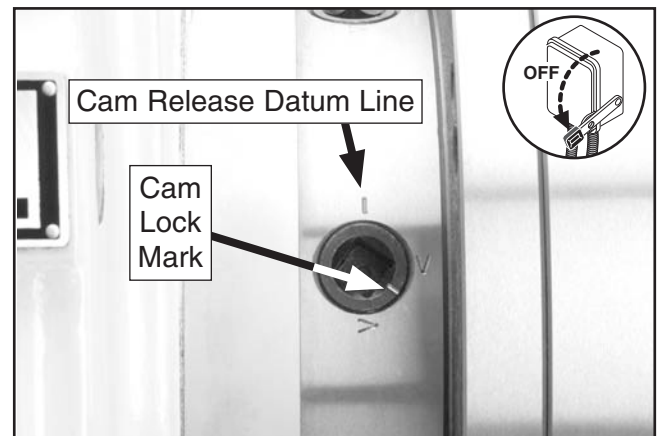


Figure 16. Cam and lock marks.

4. Unlock the other cams in the same manner. Make sure to support the chuck as you align the last cam. The chuck may come off at this point, so **it is important that the weight is supported by an adequate chuck cradle.**
5. Remove the chuck key.
 - If the chuck is still tight on the spindle, tap the back of the chuck with a rubber or wood mallet while supporting the bottom of the chuck.
 - If the chuck does not immediately come off, rotate the spindle approximately 60° and tap again. Make sure all the marks on the cams and spindle are in proper alignment.



To install a chuck or faceplate:

1. DISCONNECT LATHE FROM POWER!
2. Place a piece of plywood across the lathe ways and position it just under the chuck.
3. With the help of a hoist or with an assistant, place the chuck on the cradle.

Note: If installing the 4-jaw chuck, use the provided lifting eye (**Figure 17**) to attach a lifting cable or chain.

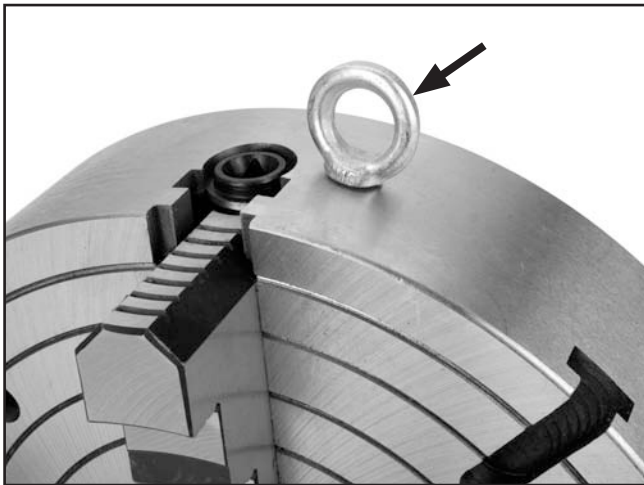


Figure 17. Lifting eye.

4. Make sure the chuck taper and spindle taper mating surfaces are perfectly clean.
5. Inspect and make sure that all camlock studs are undamaged, are clean and lightly oiled, and that the camlock stud cap screws are in place and snug.

NOTICE

Never install a chuck or faceplate without having the camlock cap screws in place or fully tightened. If you ignore this notice, once installed the chuck may never be able to be removed since the camlock studs will turn with the camlocks and never release.

6. Align the chuck-to-spindle timing marks (**Figure 19**), and slide the chuck onto the spindle.
7. Turn a camlock with the chuck key until the cam line falls between the "V" marks **Figure 18**.

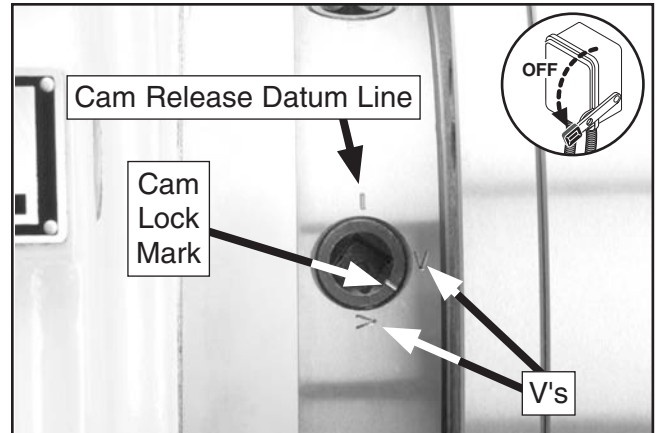


Figure 18. Cam and lock marks.

8. Lock the other cams in a star pattern so the chuck is drawn up evenly on all sides without any chance of misalignment.

Note: If any of the cam lock marks (**Figure 18**) do not fall between the "V" marks when the cam lock is tight, you must adjust the offending camlock stud as discussed in **Camlock Stud Adjustment** on **Page 27**.

9. Remove the chuck key.



Camlock Stud Adjustment

When fitting a chuck or face plate with camlock studs, or when mounting a new chuck or faceplate, it may be necessary to adjust the camlock studs.

In order to properly install or adjust one or more camlock studs, you must remove a stud locking cap screw, then thread the camlock stud in or out until the line on the side of the stud is flush with the top of the chuck casting (**Figure 19**). This is an initial adjustment.

When you place the chuck onto the lathe spindle, you may find that one or more camlocks do not fully point between the "V" marks on the chuck.

If this is the case, you will have to remove the chuck and fine-tune the camlock stud adjustment. See **Figure 19** for which direction to turn the camlock studs.

Once you have adjusted the camlock studs, install the chuck or faceplate as outlined in "To install chuck or faceplate" on **Page 26**.

NOTICE

Never install a chuck or faceplate without having the camlock cap screws in place or fully tightened. If you ignore this notice, the chuck may never be able to be removed since the camlock studs will turn with the camlocks and never release.

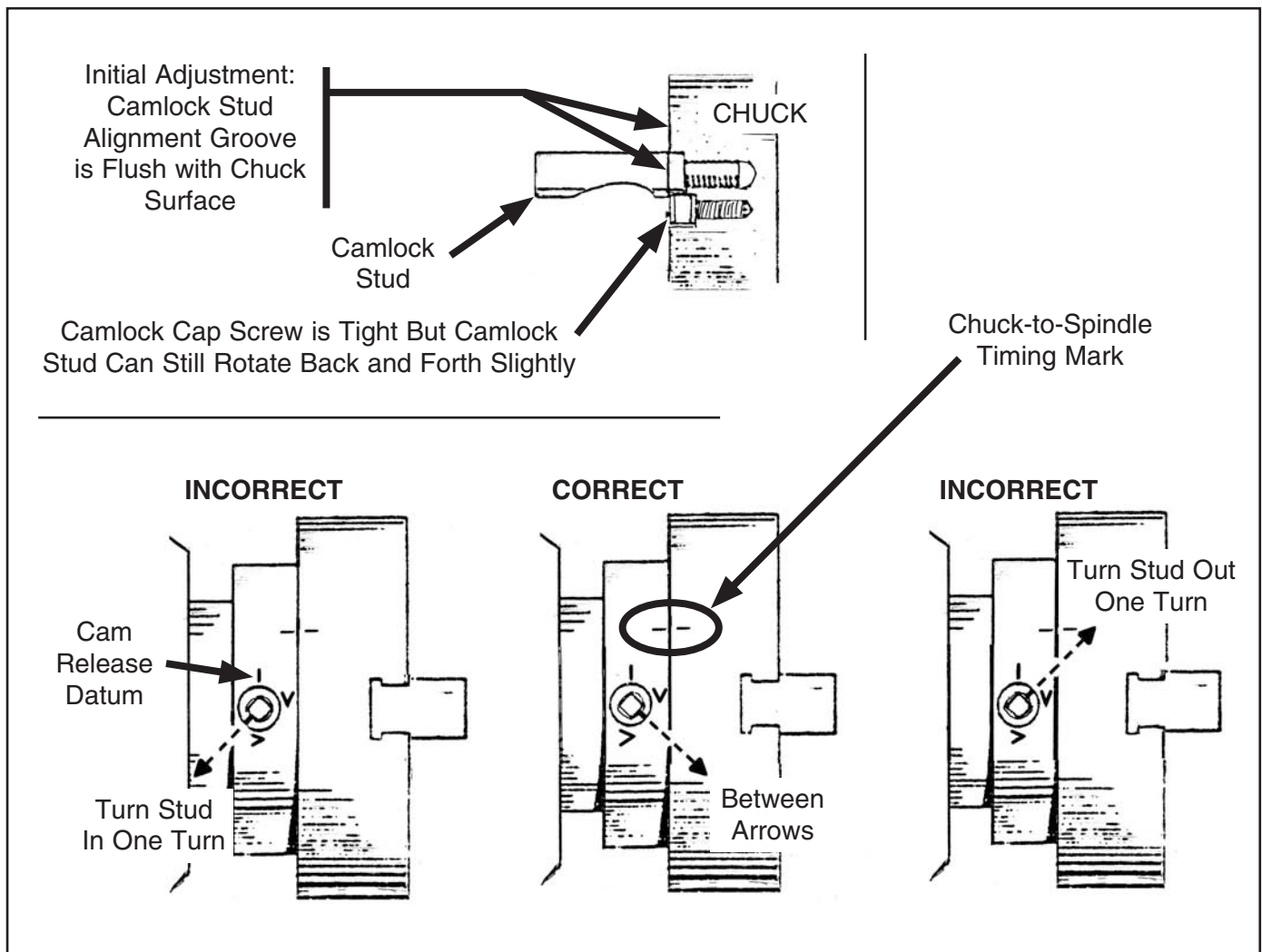


Figure 19. Camlock stud alignment.



Reversing Jaws

To reverse the jaws:

1. DISCONNECT LATHE FROM POWER!
2. Unbolt, then flip the jaw as shown in **Figures 20-23**, then re-tighten.



Figure 20. Reversing jaw step 1.



Figure 21. Reversing jaw step 2.

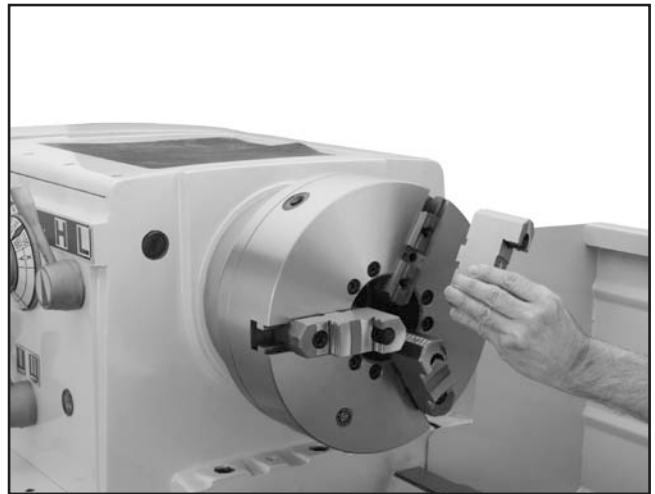


Figure 22. Reversing jaw step 3.



Figure 23. Reversing jaw step 4.

3. Repeat these steps for the other two jaws.



Gap Removal

Your lathe has a gap section below the spindle that can be removed for turning large diameter parts. This gap was installed, then ground at the factory during lathe assembly for precise fit and alignment. Factors during the remaining assembly apply additional forces to the gap; therefore, replacing the gap to the original position will be very difficult. **We don't recommend removing the gap. Reinstallation to exact factory alignment is nearly impossible. The only option is to then leave the gap out.**

To remove the gap:

1. Remove four cap screws from the bottom of the gap and two from the ends of the ways (see **Figure 24**).

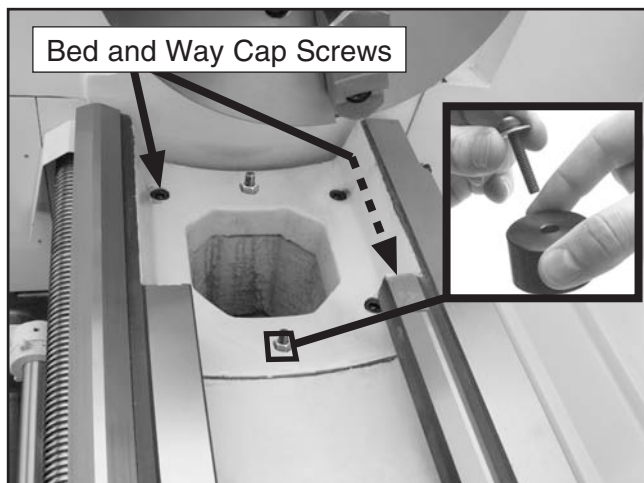


Figure 24. Lathe gap and pin puller setup.

2. Remove the set screw plug, and assemble an M6-1 x 30 cap screw, 6mm flat washer, and the gap pin puller hub shown in **Figure 24**.
3. Thread the cap screw into the threaded hole and tighten until the pin is pulled free of the gap and bed.
4. Repeat on the remaining pin.
5. Tap the outside of the gap with a dead blow hammer to loosen, and remove the gap section.

Tailstock

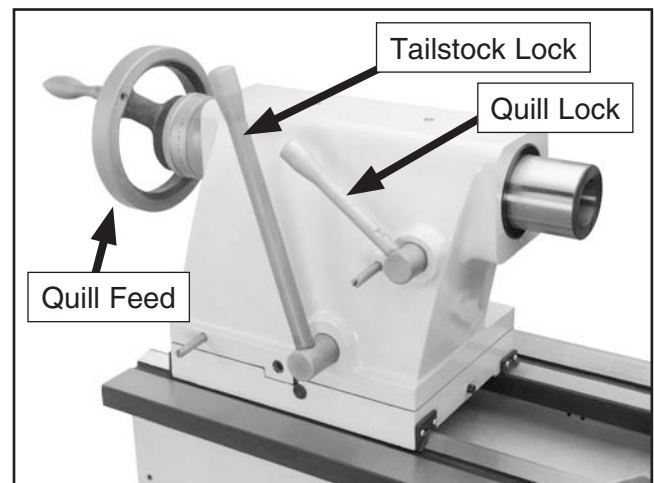


Figure 25. Tailstock and quill lock handles in locked position.

The tailstock (**Figure 25**) of the Model G0600 lathe can be used to support workpieces with the use of a live or dead center. It can drill or bore holes in the center of a part, using a drill bit and chuck, or MT#5 tapered shank drill bit. The tailstock can also be used for cutting shallow tapers by using the offset adjustment.

To use the tailstock:

1. Pull up on the lock handle.
2. Slide the tailstock to the desired position.
3. Push the tailstock lock handle to lock the tailstock in place.

To use the tailstock quill:

1. With the tailstock locked, pull up on the quill lock lever to unlock.
2. Turn the quill feed handle clockwise to feed/move the quill towards the spindle, or turn counterclockwise to move the quill away from the spindle.
3. Push the quill lock lever down to lock the quill in place.



Aligning Tailstock

To align the tailstock:

1. Using a precision level, make sure the bedways are level side-to-side and front-to-back. If the lathe is not level, shim the lathe base as required before proceeding.
2. Get two pieces of steel round stock that are 2" diameter x 6" inches long.
3. Center drill both ends of one piece of the round stock. Set the round stock aside for use in **Step 6**.
4. Using the other piece of stock, make a dead center by turning a shoulder to make a shank. Flip the piece over in the chuck and turn a 60° point (**Figure 26**).

Note: As long as the dead center remains in the chuck, the point of your center will remain true to the spindle axis. But remember the point will have to be refinished whenever it is removed and returned to the chuck.

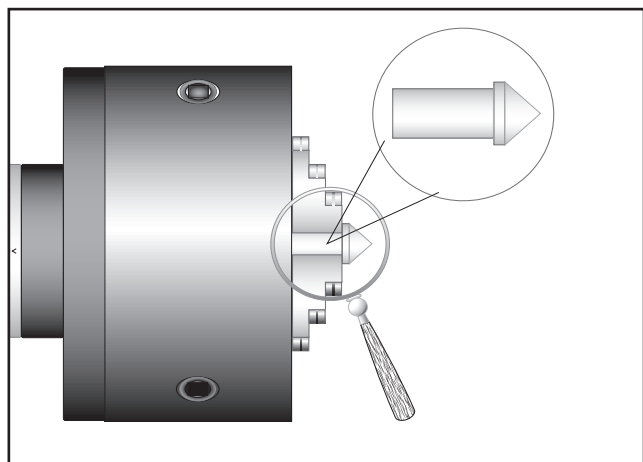


Figure 26. Chuck centering the dead center.

5. Place the live center in the tailstock.
6. Attach a lathe dog to the round stock and mount it between the centers.
7. Turn approximately 0.010" off the diameter.
8. Mount a dial indicator so the plunger is on the tailstock barrel before moving the tailstock.
9. Measure the stock diameter with a micrometer.
 - If the diameter is thicker at the tailstock end, move the tailstock toward you half of the diameter (**Figures 27**).
 - If the diameter is thinner at the tailstock end, move the tailstock away from you half the distance of the diameter (**Figure 28**).

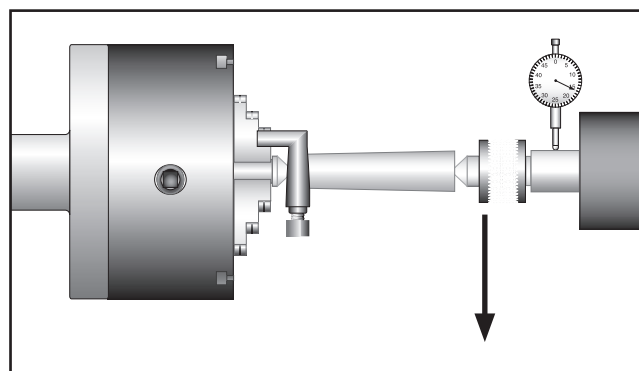


Figure 27. Tailstock adjustment option #1.

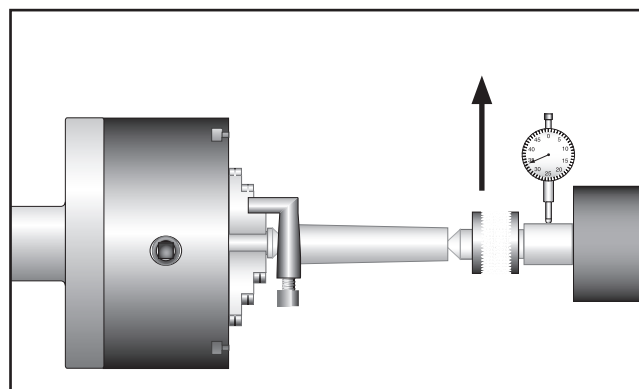


Figure 28. Tailstock adjustment option #2.

10. Turn another 0.010" off of the diameter and check for a taper. Repeat until the desired amount of accuracy is achieved.



Drilling with Tailstock

To install the tapered drill chuck:

1. With the tailstock locked, pull up to unlock the quill lock lever.
2. Turn the quill feed handle clockwise to extend the quill about one inch.
3. Insert a tapered drill arbor (**Figure 29**), or the tapered drill shank (**Figure 30**), into the quill until the taper is firmly seated. The matching tapers hold the arbor.

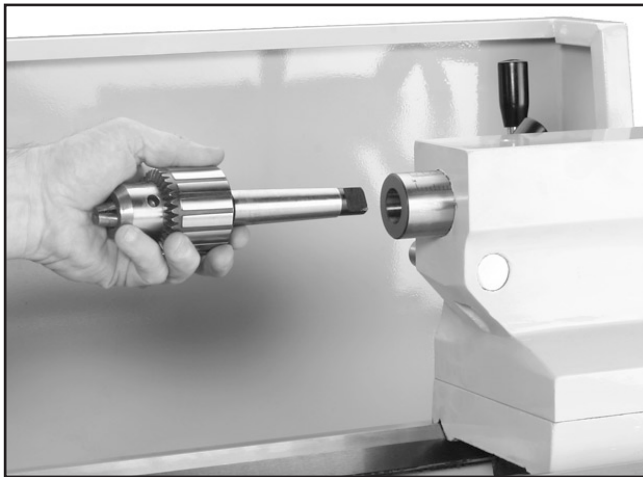


Figure 29. Typical tailstock chuck installation.

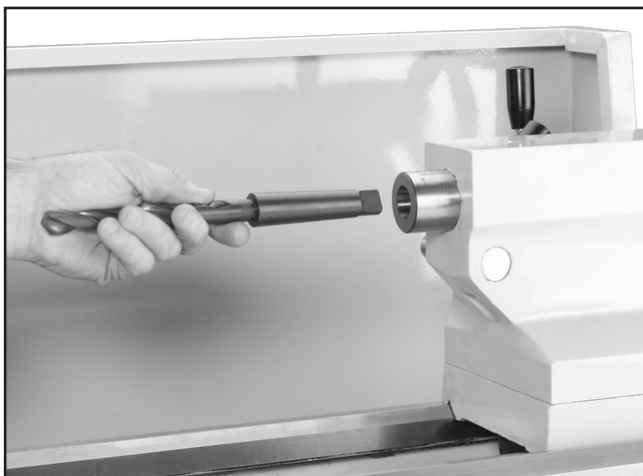


Figure 30. Typical tailstock tapered drill bit installation.

4. Turn the quill feed handle clockwise to feed the drill bit into the rotating workpiece.
5. To remove the chuck taper, turn the quill feed handle counterclockwise until the chuck is pushed out from the tailstock taper.

Cutting Tapers with Tailstock

The tailstock can be offset to cut a taper.

To offset the tailstock:

1. Lock the tailstock in position, and loosen the jack screw located just above the adjustment screw (**Figures 31 and 32**).
2. When the offset is achieved, snug the jack screw that you have been turning counterclockwise, and then snug opposite jack-screw.

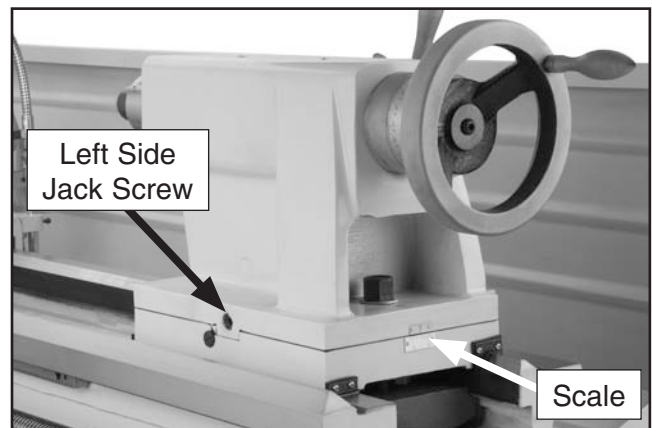


Figure 31. Tailstock off-set adjustments.

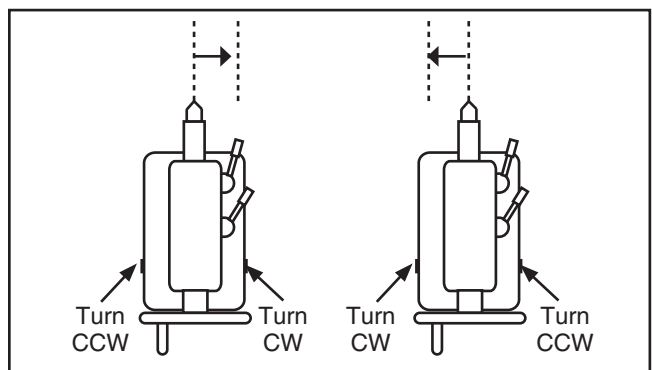


Figure 32. Jack screw adjustment verses tailstock movement.



Centers

The dead center is used in the tailstock to support workpieces. When used in the tailstock, make sure to keep the dead center tip and workpiece lubricated.

This lathe is supplied with two MT#5 dead centers—one is HSS and one is carbide tipped. The supplied MT#5-#7 sleeve fits into the spindle taper to hold the MT#7 center.

To install a dead or live center:

1. Feed the quill out about 1" so that the dead center can be inserted.
2. Insert the dead center into the quill opening. Matching tapers provide the locking action (see **Figure 33**).



Figure 33. Inserting dead center.

3. Move the tailstock into position and lock in place with the tailstock lock lever.
4. Feed the quill into the workpiece.

Note: Make sure there is a center drilled hole in the end of workpiece for the dead center.

5. Lock the quill into place once the live center and the part rotate together. The quill may need to be adjusted during operation.
6. To remove the dead center, retract the quill until the dead center pops free.

The dead center can also be used in the spindle. The most common application is when using the faceplate (see **Figure 34**).

To install the dead center in the spindle:

1. Remove the chuck from the spindle.
2. Install the dead center in the spindle sleeve.
3. Install the sleeve and center into the spindle opening.
4. Attach the faceplate to the spindle.

Note: When using the dead center in the spindle, use a lathe dog so that your part will rotate with the spindle and not spin on the dead center tip.

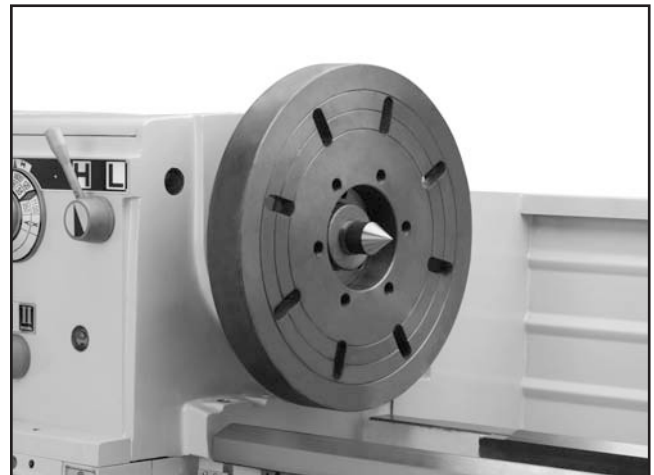


Figure 34. Typical faceplate and dead center setup.

NOTICE

Failure to keep dead center point well lubricated will damage dead center and workpiece.



Steady Rest

The steady rest serves as a support for long shafts (length to diameter ratio of 3:1 or greater). The steady rest can be placed anywhere along the length of the workpiece.

To install/use the steady rest:

1. With a helper, carefully place the steady rest on the lathe bedways so the triangular notch fits over the angled portion of the rear bedway.
2. Loosen the three thumb knobs so the finger positions can be adjusted (see **Figure 35**).

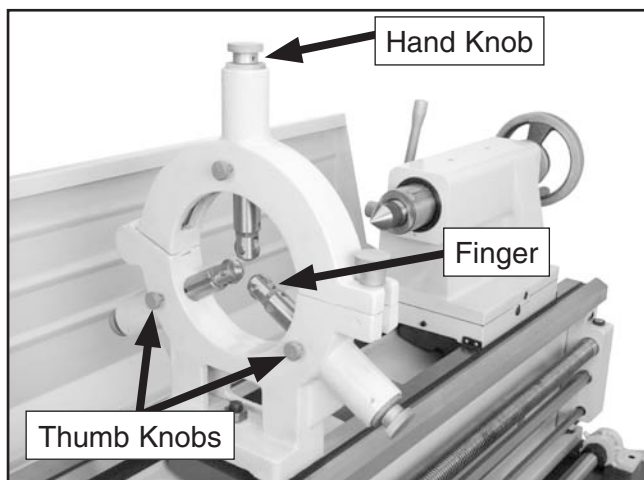


Figure 35. Steady rest adjustments.

3. Loosen the hand lock knob and open the steady rest so a workpiece can fit inside of the fingers (see **Figure 36**).

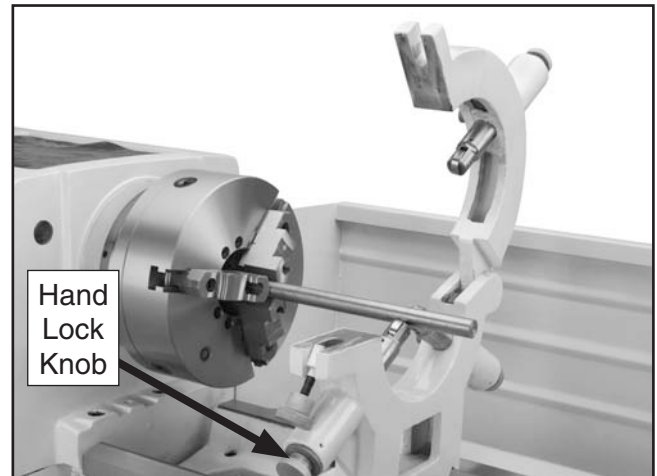


Figure 36. Hand lock knob.

4. Position the steady rest where desired. Tighten the hex nut at the base of the steady rest to secure it in place.
5. Close the steady rest so that the workpiece is inside the fingers and tighten the hand knob.
6. Set fingers snug to the workpiece and secure by tightening the three thumb knobs. Fingers should be snug and allow rotational movement of the workpiece. Lubricate the finger bearings with oil during operation.



Follow Rest

The follow rest in **Figure 37** is mounted on the saddle and follows the movement of the tool. The follow rest requires only two fingers as the cutting tool acts as the third. The follow rest is used on long, slender parts to prevent flexing of the workpiece from the pressure of the cutting tool. It should be used when the workpiece length to diameter ratio is 3:1 or greater.

The sliding fingers are set similar to those of the steady rest—free of play but not binding. Always lubricate during operation. Remove the follow rest from the saddle when not in use. After prolonged use, the fingers will need to be milled or filed to cleanup the contact surface.

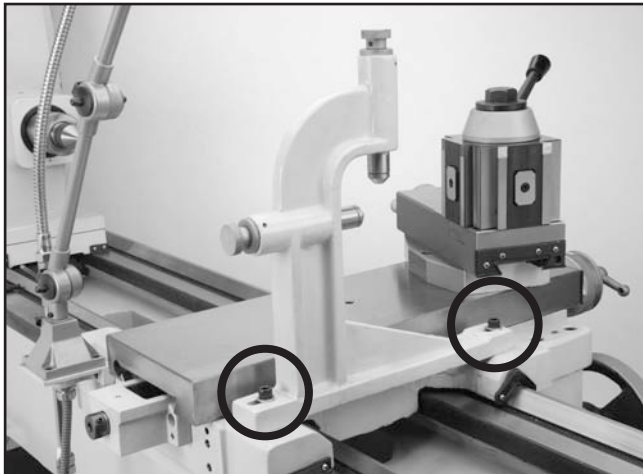


Figure 37. Follow rest attachment.

Setting Compound Slide

The compound slide is used to cut tapers on parts or to set the proper infeed angle when threading. It may also be used to cut specific lengths longitudinally, when set parallel to the spindle axis.

The compound slide handwheel has a graduated dial for precise inch feed increments. The base of the compound slide has a graduated scale for angular setup.

To set the angular position:

1. Loosen the two cap screws, one on each side of the compound slide (see **Figure 38**).

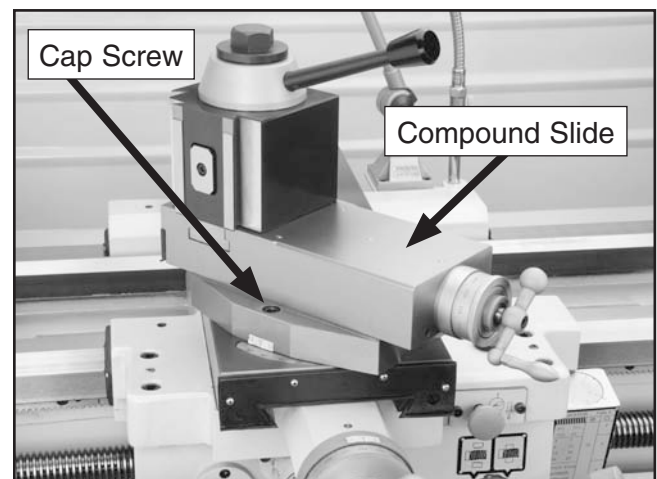


Figure 38. Compound slide set at an angle.

2. Rotate the compound slide to the desired angular position. Use the scale at the base of the slide and the indicator marks on the carriage to set the position.
3. Tighten the two cap screws. Be sure to not overtighten, as you may strip threads.

Note: *It is necessary to install your 60° degree tool bit and set it and the compound rest so it is perfectly perpendicular to a workpiece. Then using a protractor offset the compound rest to 29.5° degrees and mark the location on the cross slide. You will then have a quick reference point for setting the offset angle for cutting threads.*



Quick Change Tool Post

This 500 series quick change tool post allows for speedy tool changes. Tool registration and indexing is also fast and easy with the knurled jack screw assembly. The tool post is precision ground and hardened. The internal mechanism is a piston type design that locks the tool holder in place with superior rigidity (**Figure 39**).



Figure 39. Tool holder and tool post.

Foot Brake

The Model G0600 lathe comes equipped with a foot brake (see **Figure 40**). The foot brake is intended to be used primarily as a time saving tool. The best method for using the foot brake is turn the spindle lever **OFF**, then step on the foot brake partially to stop the spindle.

Fully pushing the footbrake while the spindle is **ON** will kill the power to the motor and bring the spindle to a stop. Stopping the spindle in this manner is harder on the lathe gearbox, brake pad, and belts. This type of brake application should be reserved for panic situations. Once stopped, the spindle lever will then need to be returned to the neutral position.

Note: Do not confuse this feature with the emergency stop button. The emergency stop button cuts power to the machine and does not apply the brake. This button must be reset to restore power to the lathe.

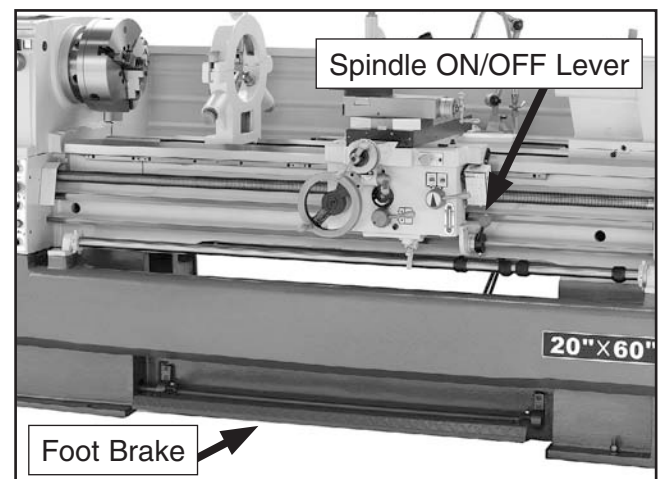


Figure 40. Foot brake and spindle *ON/OFF* lever.



Setting Spindle RPM

The spindle speed dial positions the headstock gears in one of three speed modes. In each mode, there are two speeds in low range and two speeds in high range. The range lever selects high or low range, and the range splitting lever selects one of the two remaining speeds within that range.

The range lever is used to select a set of high or low range spindle speeds from one of the three spindle speed modes shown on the spindle speed dial.

The range splitting lever is used to select the final spindle speed from the set of high or low range speeds selected by the range lever.

To find and set the spindle RPM:

1. Use the table in **Figure 41** to determine the cutting speed for your workpiece.

| Cutting Speeds for High Speed Steel (HSS) Cutting Tools | |
|---|---------------------|
| Workpiece Material | Cutting Speed (sfm) |
| Aluminum & Alloys | 300 |
| Brass & Bronze | 150 |
| Copper | 100 |
| Cast Iron, Soft | 80 |
| Cast Iron, Hard | 50 |
| Mild Steel | 90 |
| Cast Steel | 80 |
| Alloy Steel, hard | 40 |
| Tool Steel | 50 |
| Stainless Steel | 60 |
| Titanium | 50 |
| Plastics | 300-800 |
| Wood | 300-500 |
| Note: For carbide cutting tools, double the cutting speed. These values are a guideline only. Refer to the MACHINERY'S HANDBOOK for more detailed information. | |

Figure 41. Cutting speed table for HSS cutting tools.

2. Determine the final diameter, in inches, for the cut you are about to take.

Note: For this step you will need to average out the diameters or work with the finish diameter for your calculations.

3. Use the following formula to determine the needed RPM for your operation:

$$\frac{\text{Cutting Speed (SFM)} \times 4}{\text{Tool Diameter (in inches)}} = \text{RPM}$$

With the calculated RPM, let us say it needs to be 80 RPM. So the headstock levers must be moved to the appropriate **X** or **Y** and **H** or **L** positions.

Note: You may need to rotate the spindle by hand or use the jog button to get the levers to properly engage.

4. Move the spindle speed dial so the red diamond on the dial lines up with the red diamond point on the headstock. Both diamonds should be at the 12:00 O'clock position (**Figure 43**). The RPMs available now are low: 25, 80; and high: 235, 700.
5. Move the spindle range lever to **L** (Low Range) as shown in **Figure 42**. The RPMs available now are low: 25, 80.
6. Move the range splitting lever to **X** as shown in **Figure 42**. The final spindle RPMs is 80.

WARNING

Failure to follow RPM and feed rate guidelines may threaten operator safety from ejected parts or broken tools.





Figure 42. Range levers.

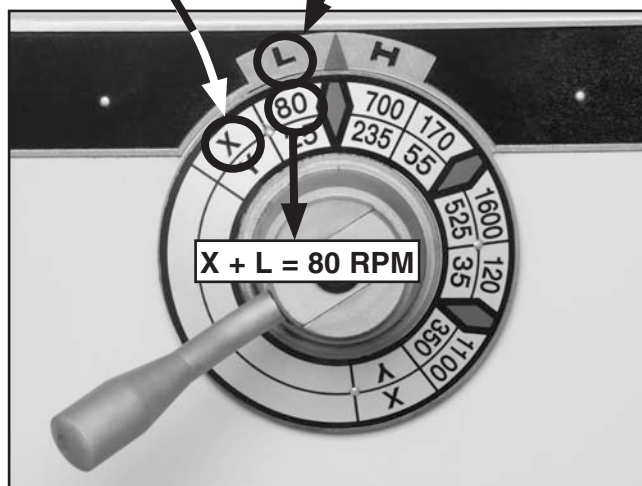


Figure 43. Spindle speed lever in left position.



Figure 44. Spindle speed lever in central position—55, 170, 525,1600 RPMs available.

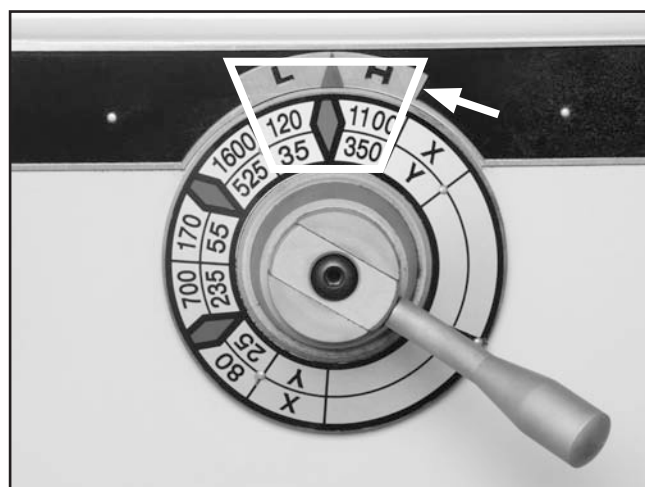


Figure 45. Spindle speed lever in right position—35, 120, 350,1100 RPMs available.



Manual Feed

You can manually move the cutting tool around the lathe by three methods. This section will review the individual controls on the carriage and provide descriptions of their uses (see **Figure 46**).

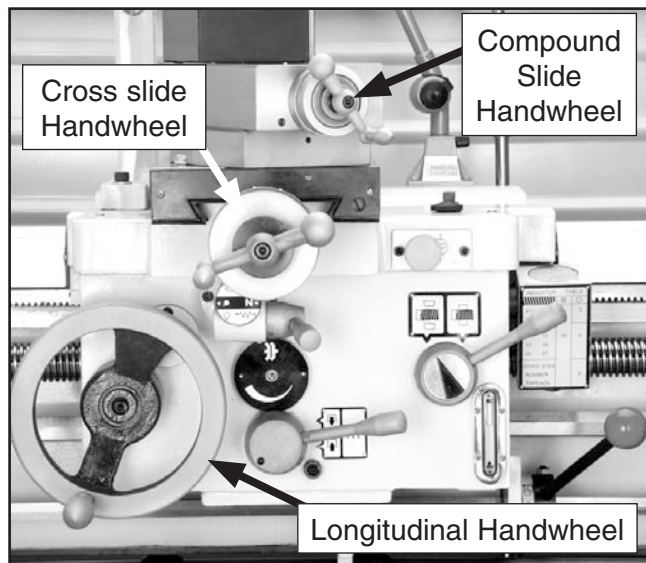


Figure 46. Carriage Controls.

Longitudinal Handwheel

The longitudinal handwheel moves the carriage left or right along the bed. This control is helpful when setting up the machine for turning or when manual movement is desired during turning operations.

Cross Slide Handwheel

The cross slide handwheel moves the top slide toward and away from the work. Turning the dial clockwise moves the slide toward the workpiece. The graduated dial can be adjusted by holding the handwheel with one hand and turning the dial with the other.

Compound Slide Handwheel

The compound slide handwheel controls the position of the cutting tool relative to the workpiece. The compound slide is adjustable for any angle within its range. The graduated dial is adjustable using the same method as the dial on the cross slide. Angle adjustment is secured by cap screws on the base of the compound slide.

Power Feed

NOTICE

Feed rate is based on spindle RPM. High feed rates combined with high spindle speeds result in a rapidly moving carriage or cross slide. Pay close attention to the feed rate you have chosen and keep your hand poised over the ON/OFF switch. Failure to take this precaution can lead to carriage and chuck crash.

For either cross or longitudinal feed, move the power feed lever on the apron in the directions indicated by the placard (**Figure 47**), and then move the feed direction lever (**Figure 48**) to select feed direction. Remember, all directions reverse when spindle rotation is reversed. Refer to the **Using the Thread Chart** on **Page 41** to learn how to shift the lathe in order to get a specific feed rate.

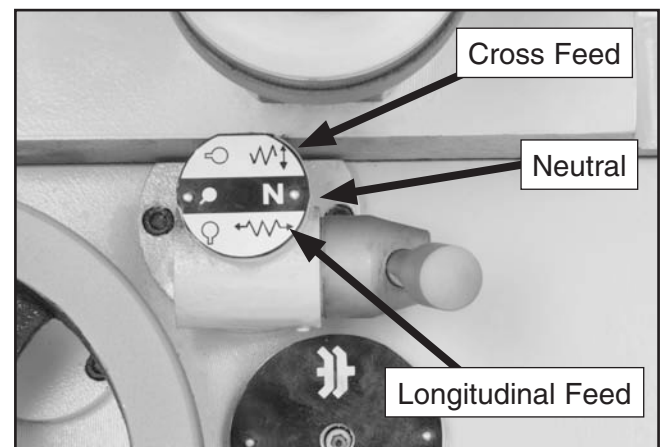


Figure 47. Power feed lever positions.

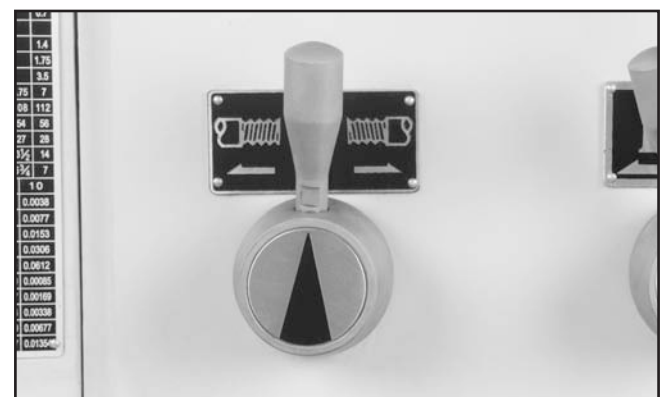


Figure 48. Feed direction lever.



Four-Position Apron Stop

Use the four-position apron stop for disengaging the apron automatically at up to four different apron locations.

You can tighten the eccentrics in place on the rod, each at different rotated positions, so each eccentric corresponds with a number on the dial. Then, depending which number you turn the stop selection dial (**Figure 49**) to, the rod will align the toe of the stop eccentric where you want the apron to stop. When the apron reaches that point, the crown of the stop eccentric will depress the clutch release lever and disengage the apron from the feed rod, thus stopping the apron.

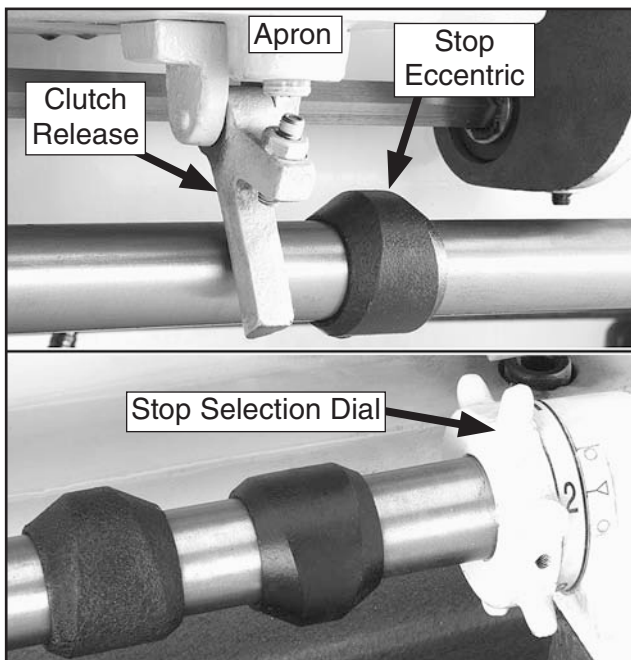


Figure 49. Four-position apron stop.

NOTICE

Every time you readjust the stop eccentrics, always manually test your apron stop setting before you rely on apron stop system to automatically disengage the apron.

NOTICE

This four-position apron stop system is only made to disengage the apron from the feed rod. When the lead screw is engaged for threading operations, the four-position apron stop will not disengage the apron—you must manually disengage the apron from the feed rod with the half nut lever or the apron will crash into the chuck.



Starting Lathe

Starting and stopping the lathe requires a couple of steps. First, the master switch (**Figure 50**) on the back of the lathe must be turned to the "1" position "**ON**", the green power lamp (**Figure 51**) will light.



Figure 50. Master switch.

Note: If you press the emergency stop button now, the power light will go out and cut power to the motor and spindle ON/OFF lever. Twisting the emergency stop button and letting it pop out will restore power for all lathe operations.

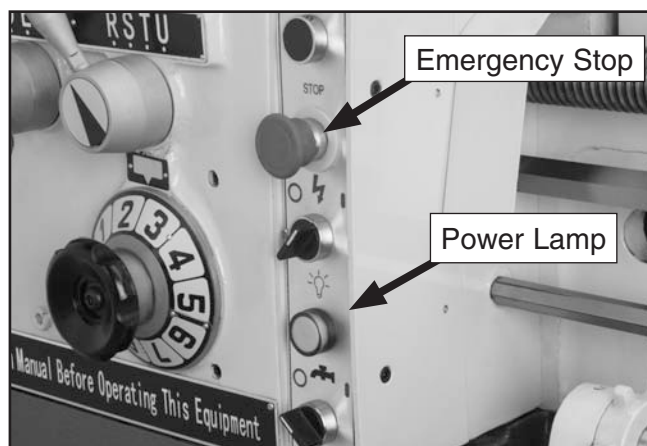


Figure 51. Power light.

Move the spindle ON/OFF lever (**Figure 52**) to start and stop spindle and chuck rotation.

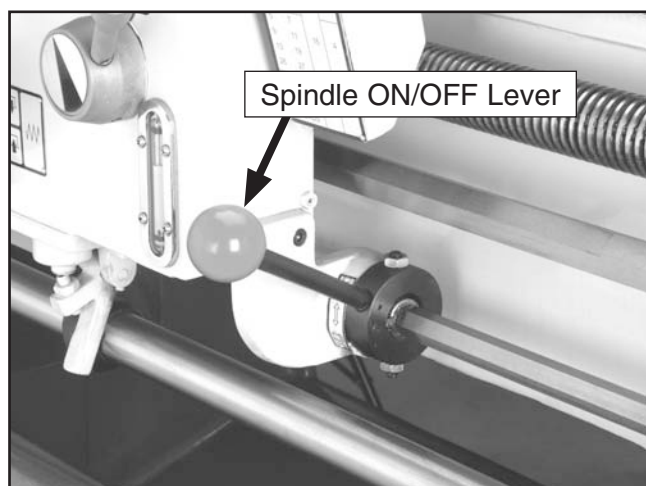


Figure 52. Spindle ON/OFF Lever.

To slow a free wheeling chuck to a stop without cutting power to the motor, partially press the foot brake (**Figure 53**) down. To stop the chuck and kill all power to the motor and controls as fast as possible in an emergency situation, push the brake down completely. Once stopped, the spindle lever will then need to be returned to the neutral position.

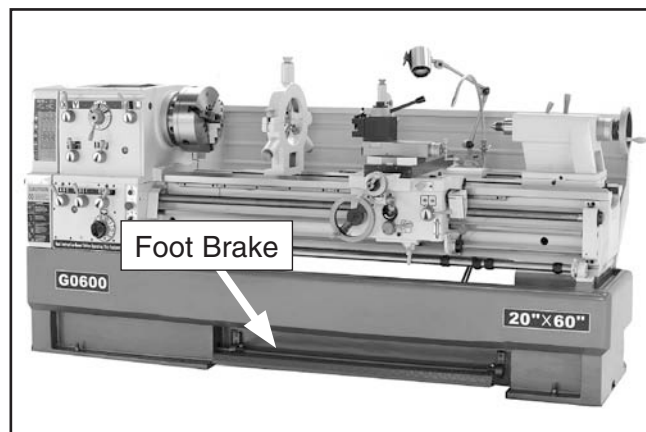


Figure 53. Foot brake.



Using the Thread Chart

This lathe comes with one 48-tooth and two 57-tooth change gears installed for cutting inch or metric threads. For cutting dimetrial or modular pitch threads, certain gears must be replaced and repositioned (refer to **Dimetrial and Modular Pitch Threading** on Page 42).

Example: To cut a modular pitch thread of 0.5, the threading chart in **Figure 56** indicates that you must change the gears into the (W) mode shown, and move the levers and dials to positions I, C, F, S, and 4 (Figures 54 and 55).

To cut inch and metric threads, or to use the chart for the X and Y power feed rates, the change gears must be changed to the (V) mode. Refer to **Inch and Metric Pitch Threading** on Page 44.

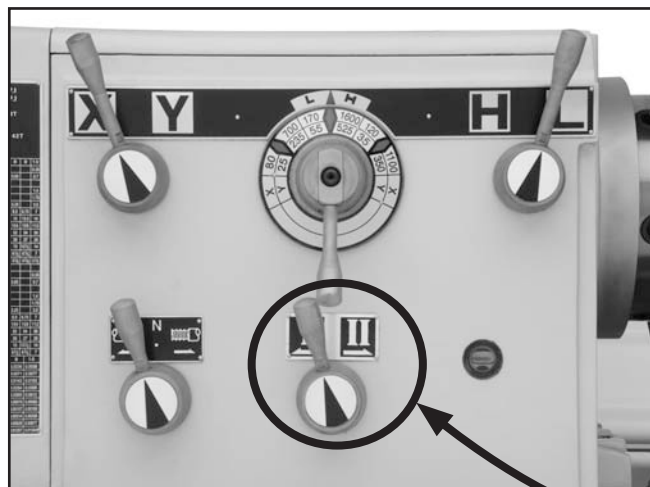


Figure 54. Headstock controls.

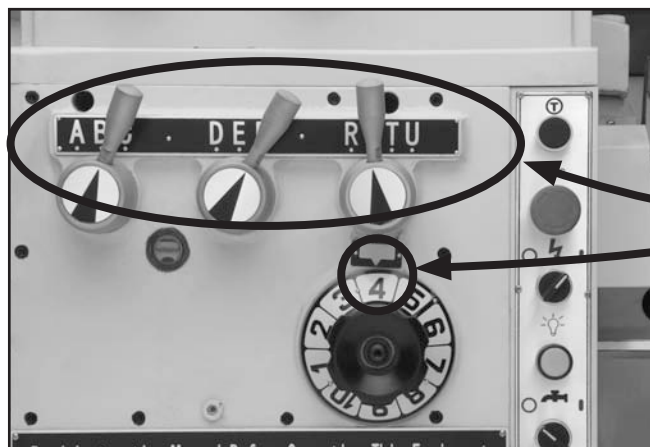


Figure 55. Gearbox controls.

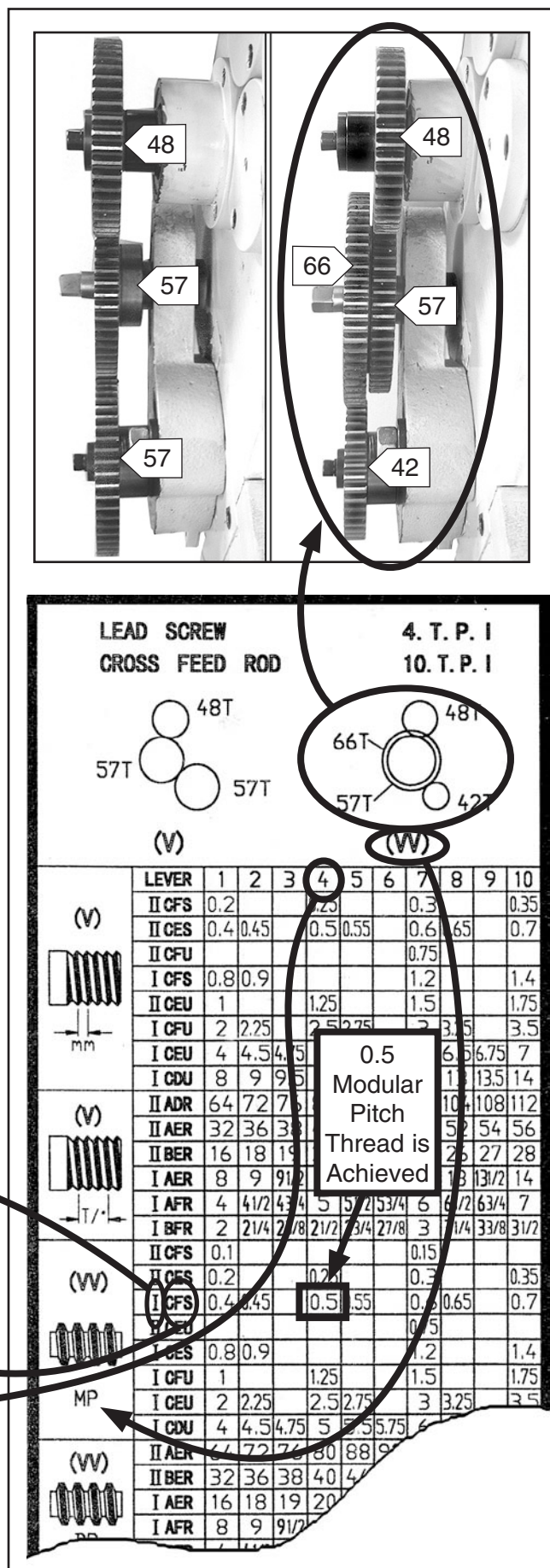


Figure 56. Threading chart.



Dimetrial and Modular Pitch Threading

NOTICE

Some threading operations may damage the lead screw if performed at high speeds. Always use the slowest speed possible for your particular operation!

This lathe comes with one 48-Tooth and two 57-Tooth change gears installed for cutting inch or metric threads. However for cutting dimetrial or modular threads the lower 57-Tooth gear must be replaced with the included 42-Tooth gear, and the 66-Tooth gear must be installed onto the shoulder of the center 57-Tooth gear (**Figure 57**). Gear positions must also be changed.

To setup the lathe to cut dimetrial or modular pitch threads:

1. DISCONNECT MACHINE FROM POWER!
2. Open the side cover and familiarize yourself with the orientation of the change gears (**Figure 57**).

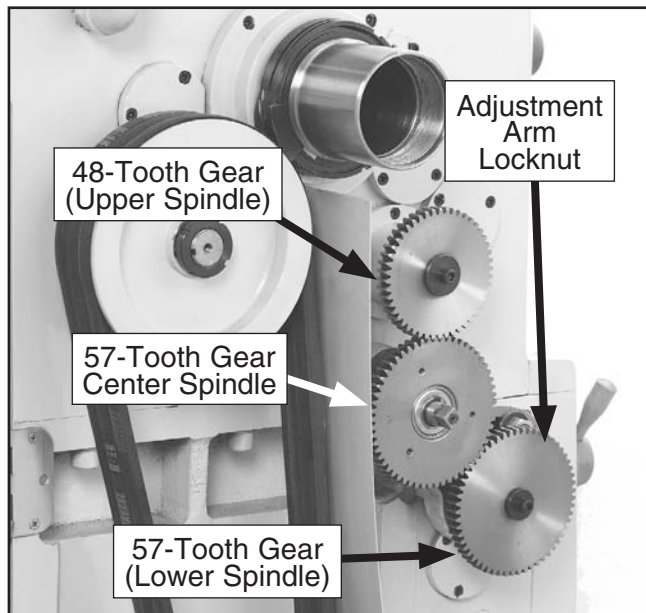


Figure 57. Change gear setup for inch and metric thread cutting.

3. Put on your safety glasses, and using a 14mm wrench, remove the center spindle and gear assembly (**Figure 58**).

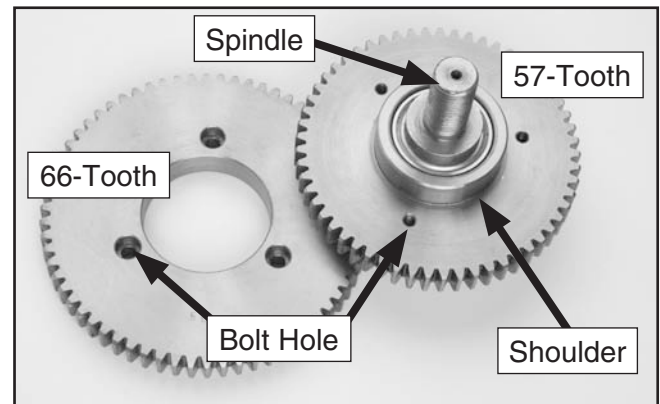


Figure 58. Center spindle, 57-tooth gear, and 66-tooth gear.

4. Using retaining ring pliers, remove the retaining ring from the spindle (**Figure 59**).

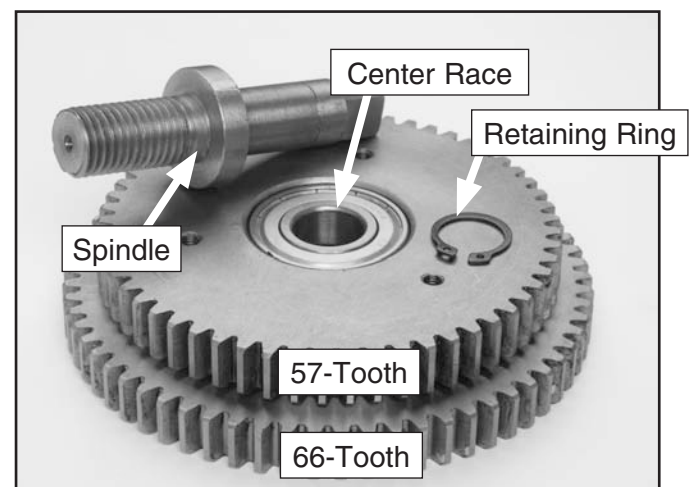


Figure 59. Spindle and center gear assembly.

5. Use a press to remove and flip the direction of the spindle, then install the retaining ring.

Note: You must use a press and a collar that will support the inner bearing race when removing the spindle from the gear. Do not use a hammer and punch to drive the spindle from the gear assembly or you will damage the ball bearings.

Note: When finished, and installed back on the lathe, the spindle must hold the 66-tooth gear outward as shown in (**Figure 63**).

6. Place the bore of the 66-tooth gear onto the shoulder of the 57-tooth gear, and align the three bolt holes (**Figure 58**) of the gears.



7. Thread the three M6-1 x 25 cap screws into the gears so the cap screws act as guide dowels allowing the gears to slide together without binding. Do not use a hammer to seat the gear.
8. Press the two gears together and tighten the three cap screws (**Figure 59**).
9. Remove the 57-tooth gear (**Figure 57**).
10. Slide the 42-tooth gear onto the lower spindle, install the shoulder washer on the spindle so the shoulder faces the gear (**Figure 60**), and install the cap screw.

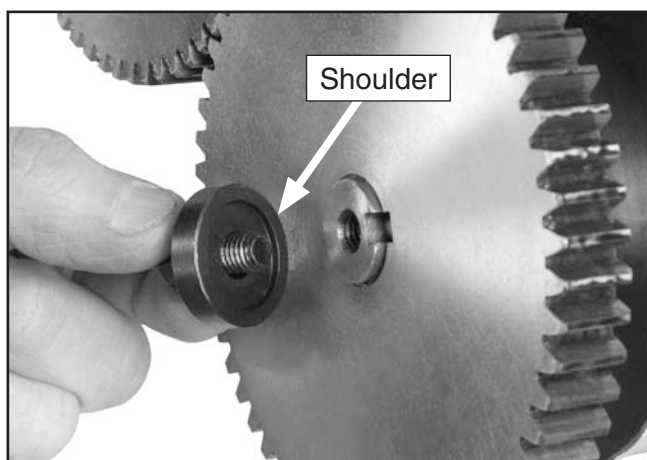


Figure 60. Shoulder washer positioning.

11. Using the 6mm hex wrench, remove the upper spindle cap screw, spacer washer, the 48-tooth gear, and the spacer (**Figure 57**).
12. With the shoulder of the 48-toothed gear facing the bearing seal (**Figure 61**), slide the gear back onto the shaft, then install the spacer, spacer washer and cap screw.

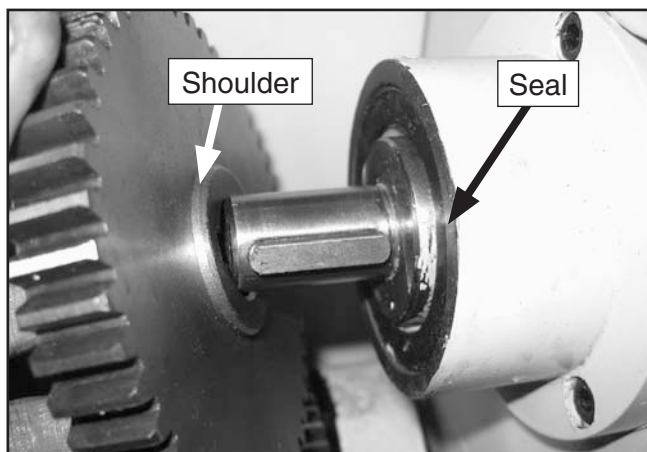


Figure 61. Upper spindle gear positioning.

Model G0600 (Mfg. Since 7/11)

13. Using a 24mm wrench, loosen the adjustment arm locknut (**Figure 62**), and let the adjustment arm swing away.

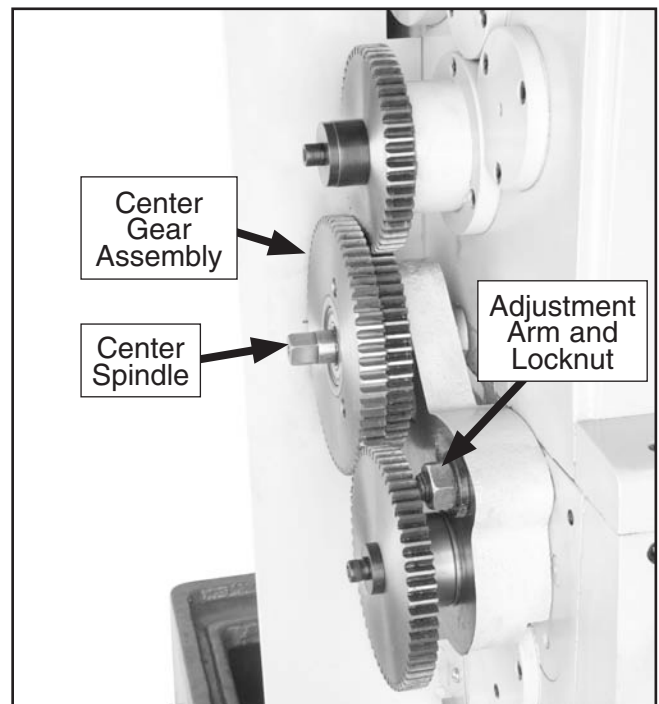


Figure 62. Center gear adjustment arm.

14. Install the center gear and spindle onto the adjustment arm, then finger tighten the spindle.
15. Move the center gear and adjustment arm assembly, then tighten the spindle and adjustment arm lock nut so all gears mesh and have 0.0015" to 0.004" of backlash.
16. Rotate the gears by hand to make sure no binding occurs, and then paint the gear teeth with general purpose automotive grease.
17. When you are finished, make sure the gear arrangement matches the (W) mode arrangement shown in **Figure 56**.
18. Close the side cover and refer to the **Threading Chart** on **Page 41** for how to shift your lathe to the appropriate feed or thread pitch.



Inch and Metric Pitch Threading

NOTICE

Always use the slowest speed possible for threading, and avoid deep cuts or you may not be able to disengage the half nut to prevent an apron crash!

If the lathe has been previously setup to cut dimetrial or modular pitch threads, you must reinstall the 57-Tooth gear on the lower spindle and remove the 66-Tooth gear on the middle spindle, and change certain gear positions.

To setup the lathe to cut inch and metric pitch threads:

1. **DISCONNECT MACHINE FROM POWER!**
2. Open the side cover and familiarize yourself with the orientation of the change gears (**Figure 63**).

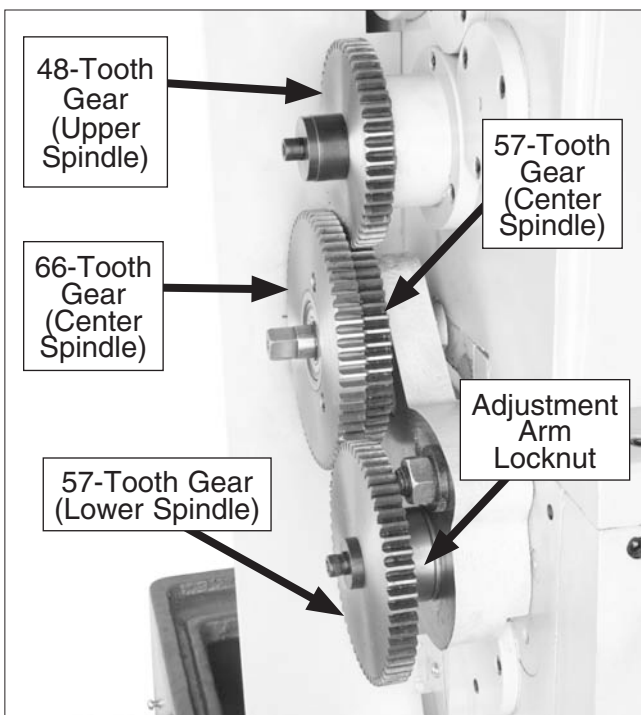


Figure 63. Change gear setup for dimetrial and modular thread cutting.

3. Put on your safety glasses, and using a 14mm wrench, remove the center spindle and gear assembly (**Figure 63**).
4. Using retaining ring pliers, remove the retaining ring from the spindle (**Figure 64**).
5. Use a press to remove and flip the direction of the spindle and reinstall the retaining ring.

Note: You must use a press and a collar that will support the inner bearing race when removing the spindle from the gear. Do not use a hammer and punch to drive the spindle from the gear assembly or you will damage the ball bearings.

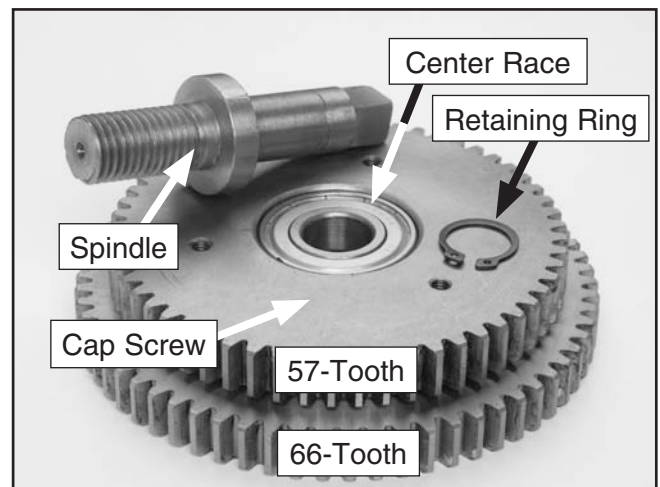


Figure 64. Spindle and center gear assy.

6. Remove the three M6-1 x 25 cap screws that hold the two gears together.
7. Protect the spindle and clamp it in a vise.
8. Carefully, using two #3 flat tip screwdrivers inserted between the gears at opposing directions, work the 66-tooth gear off of the shoulder of the 57-tooth gear. Do not use a hammer to separate the gears.
9. Use the 6mm hex wrench and remove the lower spindle cap screw, shoulder washer, and the 42-tooth gear (**Figure 63**).



10. Slide the 57-tooth gear onto the lower spindle, install the shoulder washer on the spindle so the shoulder faces the gear (**Figure 65**), and install the cap screw.

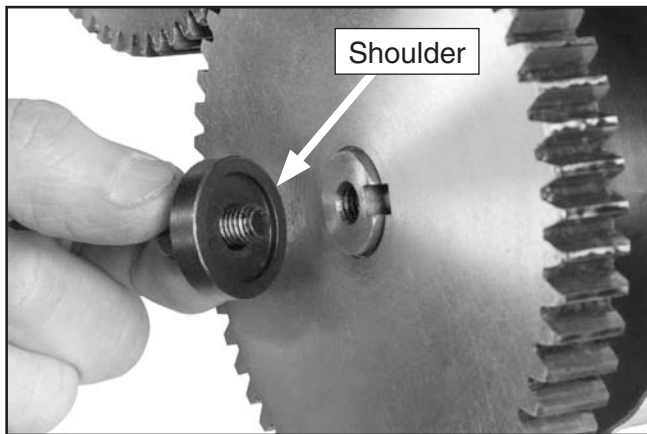


Figure 65. Shoulder washer positioning.

11. Using the 6mm hex wrench, remove the upper spindle cap screw, spacer washer, the 48-tooth gear, and the spacer (**Figure 63**).
12. Slide the spacer onto the spindle, then the 48-toothed gear with the shoulder facing the spacer (**Figure 66**). Install the spacer washer, and secure with the cap screw.

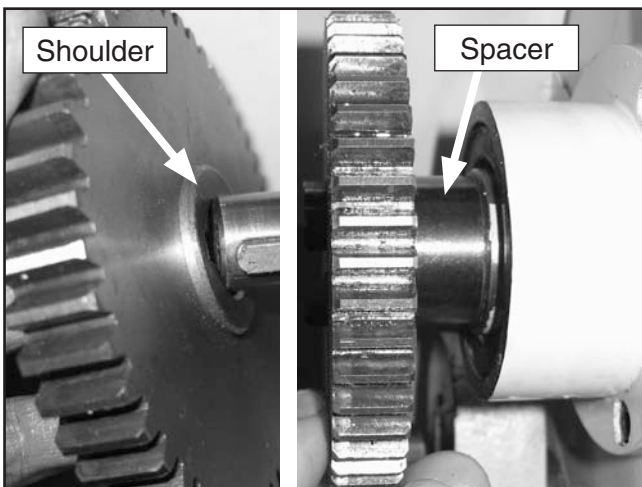


Figure 66. Upper spindle gear and spacer positioning.

13. Using a 24mm wrench, loosen the adjustment arm locknut (**Figure 67**), and let the adjustment arm swing away.

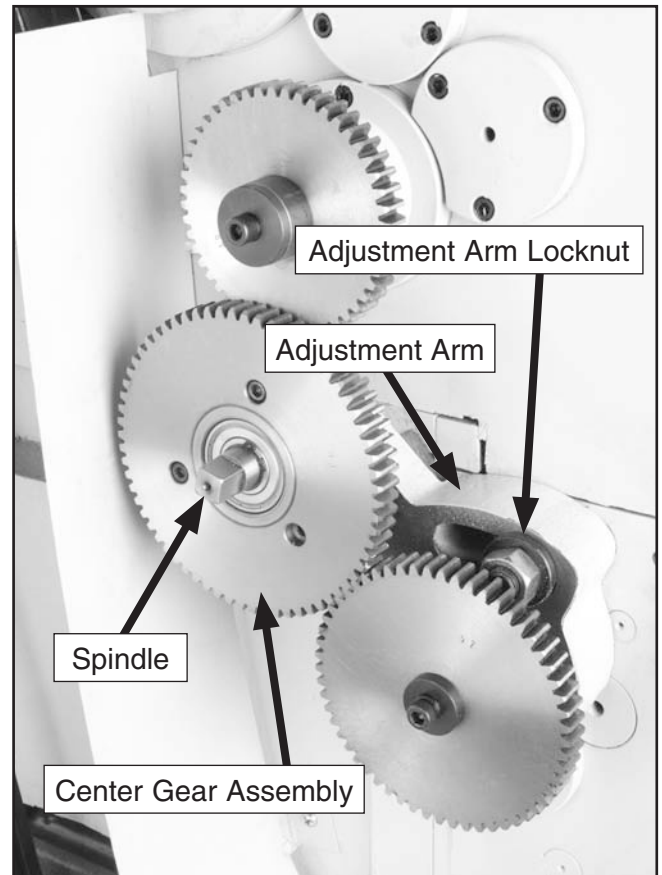


Figure 67. Center gear adjustment arm.

14. Install the center gear and spindle onto the adjustment arm, then finger tighten the spindle.
15. Move the center gear and adjustment arm assembly, then tighten the spindle and adjustment arm lock nut so all gears mesh and have 0.0015" to 0.004" of backlash.
16. Rotate the gears by hand to make sure no binding occurs, and then paint the gear teeth with general purpose automotive grease.
17. When you are finished, make sure the gear arrangement matches the (V) mode arrangement shown in **Figure 56**.
18. Close the side cover and refer to the **Threading Chart** on **Page 41** for how to shift your lathe to the appropriate feed or thread pitch.



Thread Dial

This lathe is equipped with a thread dial that lets you know where on the leadscrew you can re-engage the halfnut to resume inch threading. However, since the leadscrew is a 4 TPI, then the thread dial is not needed for any thread that is divisible by 4. Refer to the Indicator Table in **Figure 68** and see **Figure 69** for dial locations.

For metric dimetrial and modular threading, the thread dial is not used and you must leave the halfnut lever engaged until the threading job is complete.

NOTICE

Always use the slowest speed possible for threading, and avoid deep cuts or you may not be able to disengage the half nut to prevent an apron crash!




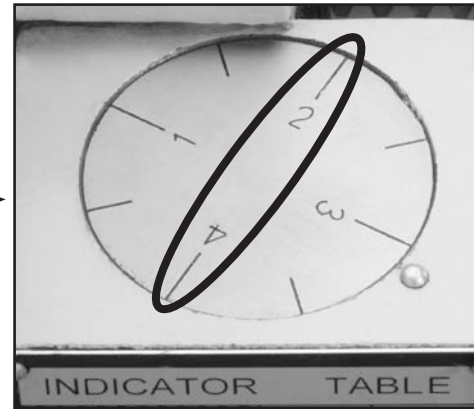
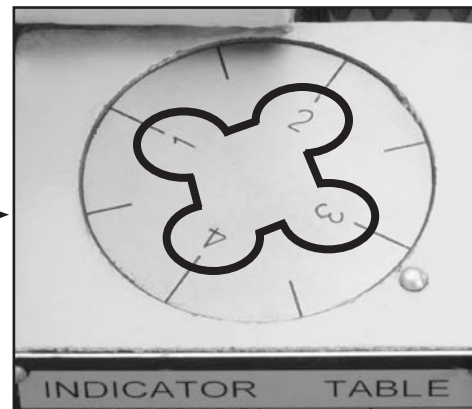
| INDICATOR TABLE | | |
|---|---|---|
|  |  |  |
| 4½ , 11½ 13½ , 23 | 16 | 2 |
| 5 , 7 9 , 11 3 , 19 26 , 27 | | 4 |
| OTHER EVEN NUMBER THREADS | | 8 |
| | | |

Figure 68.
Indicator Chart.

Number of teeth on the
thread dial drive gear.



For fractional TPI and 23 TPI:
Numbers 2 or 4, 1 or 3, or any two
opposing marks can be used.



For 3, 5, 7, 9, 11, 19, 27 odd
TPI and even 26 TPI: Any four
grouped numbers or marks can
be used.



For all other even numbered
TPI: Any number or mark can be
used. Note: Since the leadscrew
is a 4 TPI, then the thread dial
is not needed for any thread that
is divisible by 4.

Figure 69. Thread dial use.



SECTION 5: ACCESSORIES

This section includes the most common accessories available for this lathe through the Grizzly catalog, online at www.grizzly.com, or by calling 1-800-523-4777.

G7895—Citrus Degreaser

This citrus based degreaser is perfect for cleaning cosmoline off of new equipment. It also works for cleaning auto parts, tools, concrete, and porcelain surfaces. Natural, safe for the environment, and contains no CFC's.



Figure 70. G7895 Citrus Degreaser.

G2871—Boeshield® T-9 12 oz Spray

G2870—Boeshield® T-9 4 oz Spray

This ozone friendly protective spray penetrates deep and really holds up against corrosive environments. Lubricates metals for months and is safe for use on most paints, plastics, and vinyls.



Figure 72. Boeshield® T-9 spray.

T20501—Face Shield Crown Protector 4"

T20502—Face Shield Crown Protector 7"

T20503—Face Shield Window

T20452—"Kirova" Anti-Reflective S. Glasses

T20451—"Kirova" Clear Safety Glasses

H0736—Shop Fox® Safety Glasses

H7194—Bifocal Safety Glasses 1.5

H7195—Bifocal Safety Glasses 2.0

H7196—Bifocal Safety Glasses 2.5



Figure 71. Eye protection assortment.

Model G0600 (Mfg. Since 7/11)

H3788—G96® Gun Treatment 12 oz Spray

H3789—G96® Gun Treatment 4.5 oz Spray

This triple action gun treatment cleans, lubricates, and protects all metal parts. Contains solvents that completely remove all traces of rust and corrosion and leaves no gummy residue.



Figure 73. G96® Gun Treatment spray.

Call 1-800-523-4777 To Order



H7938—Quick Change Collet Closer

This Quick Change Collet Closer allows you to quickly interchange parts on your Model G0600 Metal-Cutting Lathe. The positive-locking handle clamps standard 5-C collets safely and securely for precision turning.

See the current Grizzly catalog for a full line of 5-C collets.



Figure 74. H7938 Quick Change Collet Closer.

H9737—Taper Attachment for the G0600 Lathe.

The Model H9737 mounts to the back of the carriage and bed way to produce accurate tapers without repositioning.

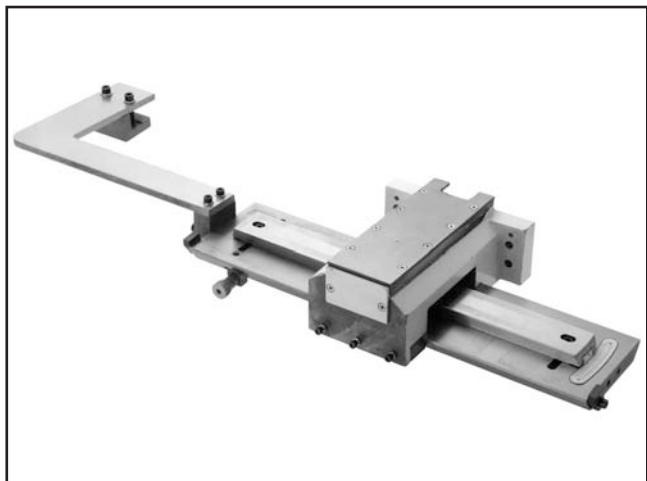


Figure 75. H9737 Taper Attachment.

G1238—Precision 5-C Collet Set

This 15 piece 5-C collet set is made from high grade collet steel and precision ground to exacting tolerances.



Figure 76. 15 Piece 5-C Collet Set.

H3741—30 HP/25 HP Start, Phase Converter

Add 3-phase electrical supply with this rotary phase converter! Operate single or multiple motors, transformers, and resistance loads at 100% power and 95% efficiency while saving big dollars at cheaply metered, single-phase electrical rates. For application assistance, please call our technical support group at (570) 546-9663.



Figure 77. Rotary Phase Converter

Call 1-800-523-4777 To Order



H2670—HSS Square Tool Bits ½" x ½" x 4

Our ground tool bits are M-2 HSS, making them some of the most durable tool bits around. Make your own specialized cutters in any shape using a silicon carbide grinding wheel (G8235-37) on your grinder.

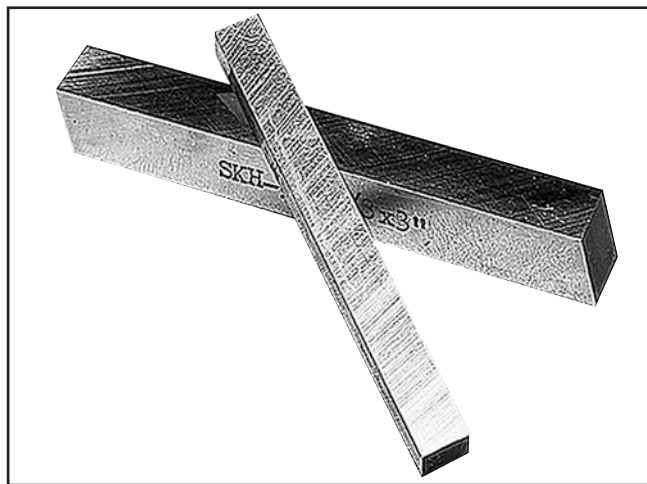


Figure 78. H2670 HSS Square Tool Bits.

H5687—8-Pc. Pre-Ground Tool Bit Set

Tired of grinding your blank high speed steel tool bits? We've done it for you! 8-pc set comes with these sharpened profiles: offset right and left hand tools with chip breaker, straight and chip breaker style threading tools, internal threading tool, parting tool, boring tool and turning tool. These tool bits are evenly hardened to better than 64C.

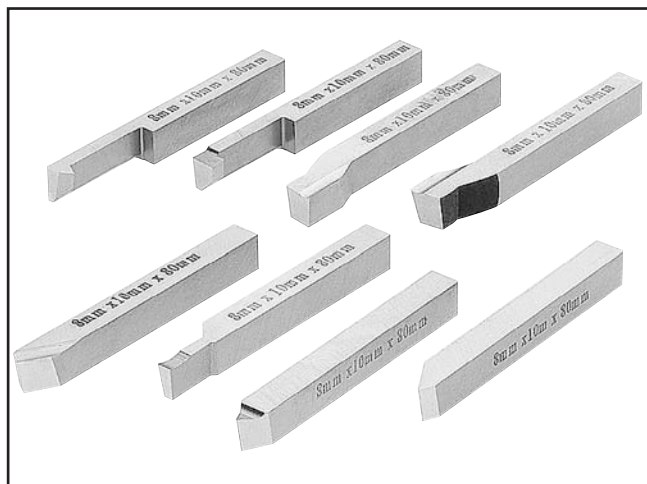


Figure 79. H5687 Pre-Ground Tool Bit Set.

G9777—20-Pc. Carbide Tipped Tool Bit Set

An exceptional value for carbide lathe tool bits! This twenty-piece set offers tremendous savings over bits sold individually, plus every type is duplicated and ready at hand when you need it. The carbide is C-6 grade for cutting steel and alloys.

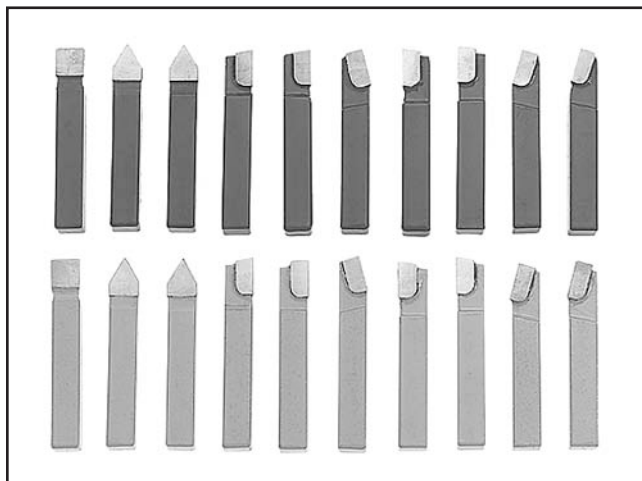


Figure 80. G9777 20 Pc. Carbide Tool Set.

G5640—5-Pc. Indexable Carbide Tool Set ½"

G6706—Replacement TiN Coated Carbide Indexable Insert

Five-piece turning tool set features indexable carbide inserts with "spline" type hold-down screw that allow indexing without removing the screw. Each set includes AR, AL, BR, BL, and E style tools with carbide inserts, hex wrench, extra hold-down screws and a wooden case.

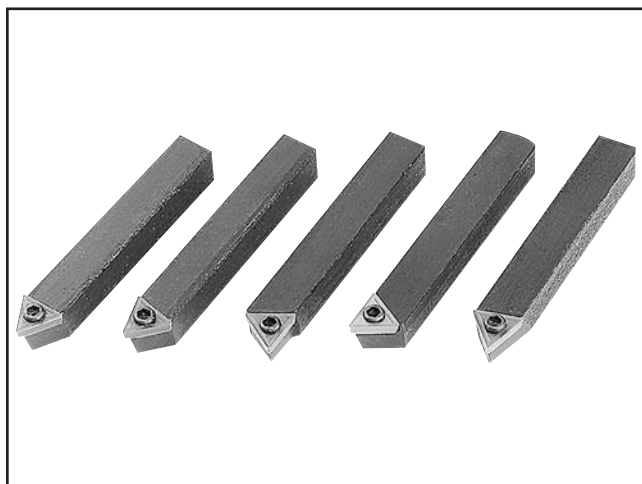


Figure 81. G5640 5 Pc. Indexable Tool Set.



H5930—HSS Center Drill Set 60°**H5931—HSS Center Drill Set 82°**

Double ended HSS center drills, are precision ground for unsurpassed accuracy. Each set includes sizes 1-4.

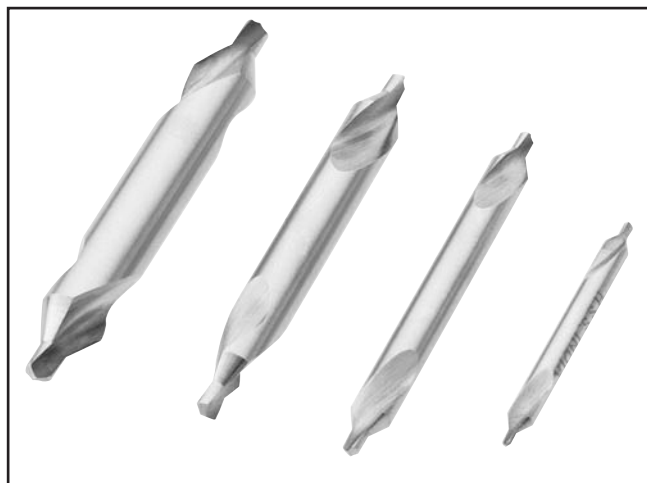


Figure 82. HSS Center Drills.

H6499—Brass 5-C Emergency Collet**H6500—Nylon 5-C Emergency Collet****H7500—Steel 5-C Emergency Collet**

Emergency collets to the rescue! We offer three styles of collets to get you out of a bind and back to work! Available in steel, brass and nylon, our 5-C collets are easy to machine to the size you need for holding delicate parts, odd sized tooling or your greatest challenge. (The steel collets have annealed faces and bores.) Minimum diameters are less than 0.085". Every busy shop should have a few of these on hand.

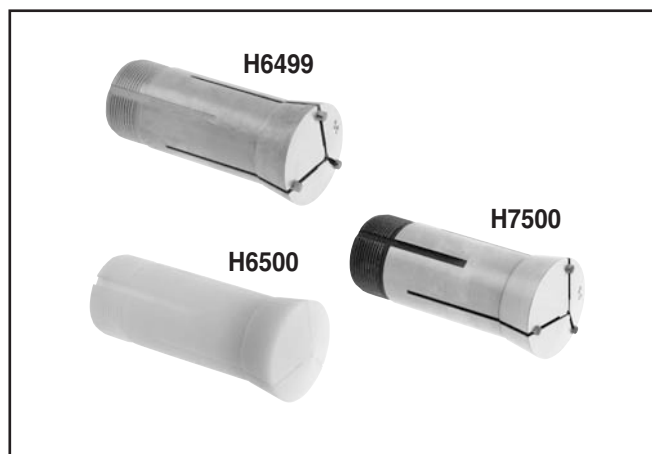


Figure 83. 5-C Emergency Collets

H7504—6 Pc. Square 5-C Collet Set**H7505—7 Pc. Hex 5-C Collet Set**

Whether you're using a spin indexer, collet closer on a lathe or grinding fixture on your surface grinder, eventually you are going to need to hold hex or square stock. These two sets feature hardened and ground bodies and sizes that fit most needs. The H7504 square set has sizes: 1/8", 1/4", 3/8", 1/2", 5/8" and 3/4". The H7505 hex collet set has sizes: 1/8", 1/4", 3/8", 1/2", 5/8", 3/4" and 7/8".



Figure 84. 5-C Hex and Square Collets.

H2987—1/2" Bent Lathe Dog**H2988—1" Bent Lathe Dog****H2989—1 1/2" Bent Lathe Dog****H2990—2" Bent Lathe Dog****H2991—3" Bent Lathe Dog**

Just the thing for precision machining between centers! These bent tail lathe dogs are made of durable cast iron and feature square head bolts.



Figure 85. H2987-91 Lathe Dogs.



| MODEL | SIZE | BODY DIA. | DRILL DIA. | OVERALL LENGTH |
|-------|------|-----------|------------|----------------|
| H4456 | 1 | 1/8" | 3/64" | 1 1/4" |
| H4457 | 2 | 3/16" | 5/64" | 1 7/8" |
| H4458 | 3 | 1/4" | 7/64" | 2" |
| H4459 | 4 | 5/16" | 1/8" | 2 1/8" |
| H4460 | 5 | 7/16" | 3/16" | 2 3/4" |
| H4461 | 6 | 1/2" | 7/32" | 3" |
| H4462 | 7 | 5/8" | 1/4" | 3 1/4" |
| H4463 | 8 | 3/4" | 5/16" | 3 1/2" |

These high speed steel center drills are precision ground for unsurpassed accuracy.

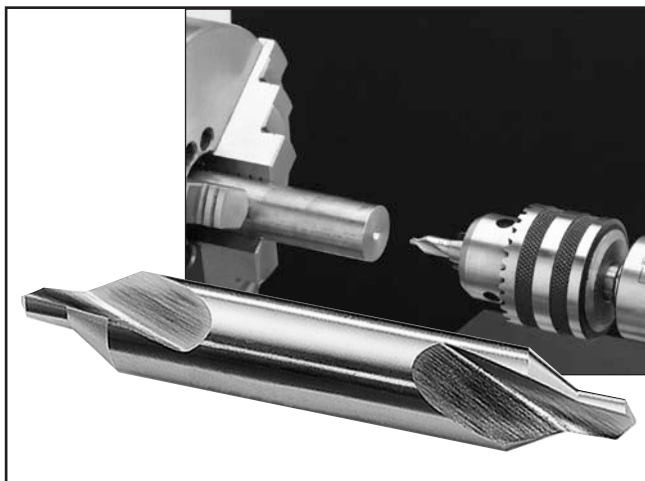


Figure 86. H4456-63 HSS Ground Center Drills.

G9245—MT4 Live Center Set

A super blend of quality and convenience, this live center set offers seven interchangeable tips. High-quality needle bearings prolong tool life and special tool steel body and tips are precision ground. Supplied in wooden box.



Figure 87. G9245 Live Center Set.

Call 1-800-523-4777 To Order



SECTION 6: MAINTENANCE



Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Checks and Maintenance:

- Loose mounting bolts.
- Emergency stop and brake operation.
- Worn or damaged wires.
- Coolant level.
- Lubrication levels.
- Remove chips.
- Any other unsafe condition.

Monthly Check:

- Change coolant as needed.

Cleaning

Cleaning the Model G0600 is relatively easy. Make sure to unplug the lathe before cleaning it. Clean your machine every day or more often as needed. Remove chips as they accumulate. Wet chips left on the machine will eventually invite oxidation and gummy residue to build up around moving parts. Cleaning will help keep your lathe running smoothly. Always be safe and responsible with the use and disposal of cleaning products.

Lubrication

General Lubrication

Keep machined metal surfaces like the chuck, ways bores, controls, change gears, rollers, and unpainted cast iron rust-free with applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see **SECTION 5: ACCESSORIES** on **Page 47** for more details).

Headstock

The headstock gearbox is lubricated with an oil pump and 20W non-detergent oil, ISO 68, or an equivalent gear box machine oil. Keep the oil level full as seen in the sight glass shown in (**Figure 88**). When the lathe is running, periodically make sure that you see oil pumping out of the oil tube in the pump-check sight glass (**Figure 88**). If oil is not seen pumping, shut the lathe down immediately and contact Grizzly Technical Support.



Figure 88. Oil pump sight glass.



After the first month of daily operation, drain the oil through the drain plug at the back of the headstock (**Figure 89**), open the side cover and refill the headstock through the fill plug (**Figure 90**). Change the headstock oil yearly, or more frequently if heavy machine use requires it.



Figure 89. Headstock oil drain.

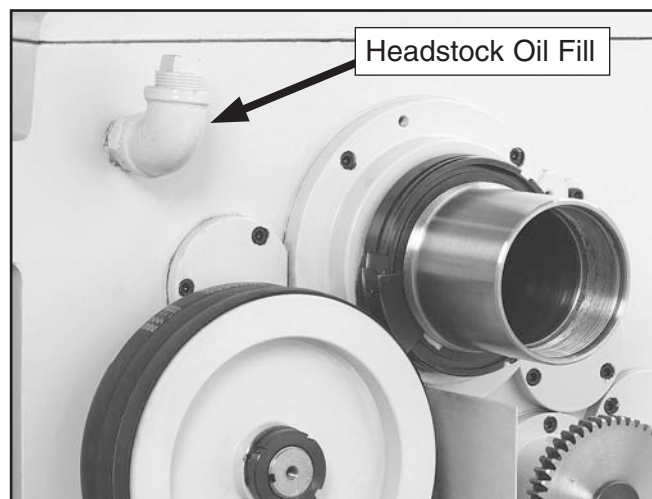


Figure 90. Headstock oil fill.

Quick Change Gearbox

The quick change gearbox is lubricated with 20W non-detergent oil, ISO 68, or an equivalent gear box machine oil. Keep the oil level full as seen in the sight glass (**Figure 91**).

After the first month of daily operation, drain and refill the gear box. See **Figure 92** for plug locations. Change the gearbox oil yearly, or more frequently if heavy machine use requires it.



Figure 91. Oil sight glass locations.



Figure 92. Gearbox oil fill.

Apron

The apron gearbox is lubricated with 20W non-detergent oil, ISO 68, or an equivalent gear box machine oil. Keep the oil level full as seen in the sight glass shown in (**Figure 93**).

After the first month of daily operation, drain the apron oil through the drain plug (**Figure 93**), and refill the apron through the fill plug labeled OIL (**Figure 93**). At a minimum, change the apron oil yearly or more frequently if heavy machine use requires it.

Apron Oil Pump

To lubricate the saddle slide and the cross slide way guides, pull the oil pump knob (**Figure 93**) out and hold it for two or three seconds, the pump will draw oil from the apron reservoir, and then push the knob in so the oil is pumped through drilled passages to the way guides. Repeat this process until the way guides are lubricated. Lubricate the guides once before and once after using the lathe. If the lathe is in an environment that has high moisture or is very dirty, increase the lubrication interval.

Lead Screw and Feed Rod

To lubricate the lead screw, clean with mineral spirits and relubricate with a very light machine oil so rust will not form on the threads. DO NOT use grease, as grease will pickup metal chips and abrasives and carry them into the halfnut, causing premature wear.

Fill the lead screw and feed rod bearing housing through the oil plug (**Figure 94**) until the housing is full. Use the same oil as used in the apron.

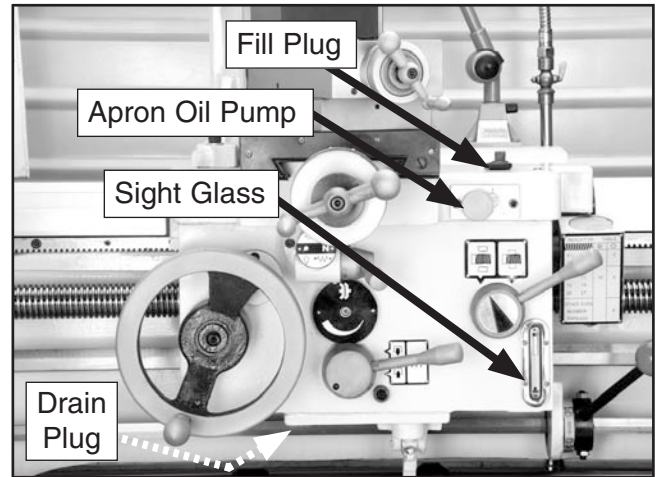


Figure 93. Apron lubrication components.



Figure 94. Leadscrew lubrication.



Ball Oilers

This lathe has 11 ball oiler locations. To lubricate ball oilers, clean the outside of the ball oiler, push the ball with the tip of the oil can nozzle and squirt one or two drops of oil inside the oiler before and after using the lathe. If the shop environment has high moisture or is very dirty, increase the oiling interval. Use the same oil as you are using for the headstock. The locations listed below show the ball oilers in **Figures 98 to 97**:

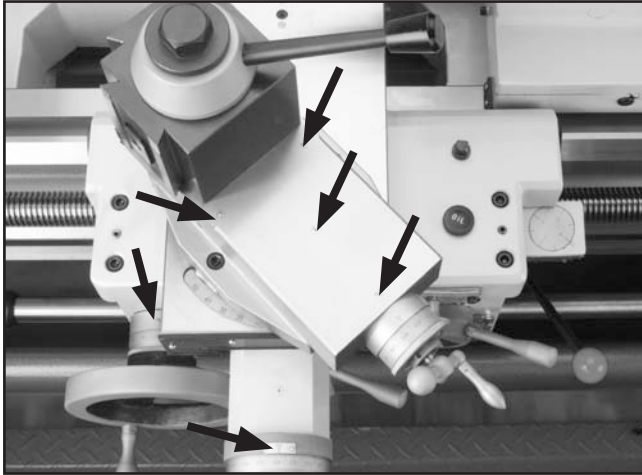


Figure 95. Apron and slide ball oiler locations: 4 ball oilers on the compound rest, 1 ball oiler on the cross slide handle hub, 1 ball oiler on the apron feed handle hub.

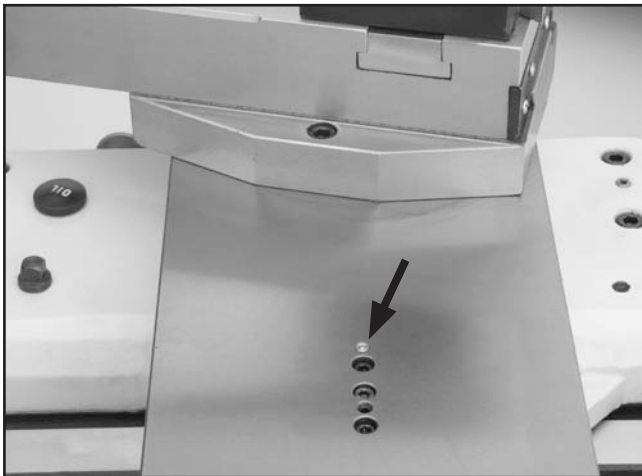


Figure 96. Cross slide ball oiler location: 1 ball oiler on the cross slide.

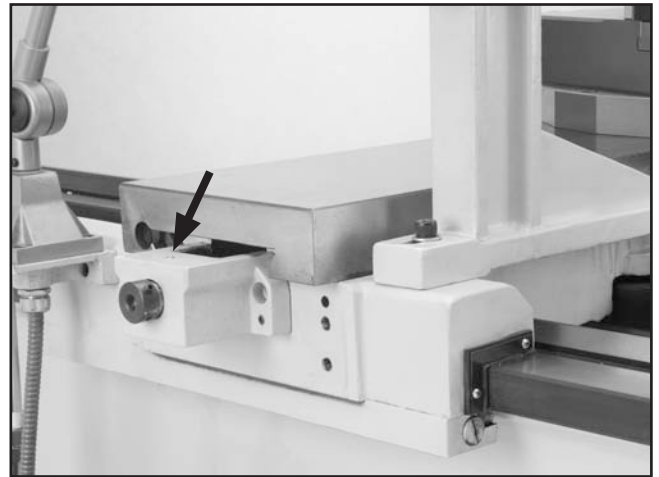


Figure 97. Cross slide leadscrew end bearing ball oiler location: 1 ball oiler on the cross slide lead screw end cap.

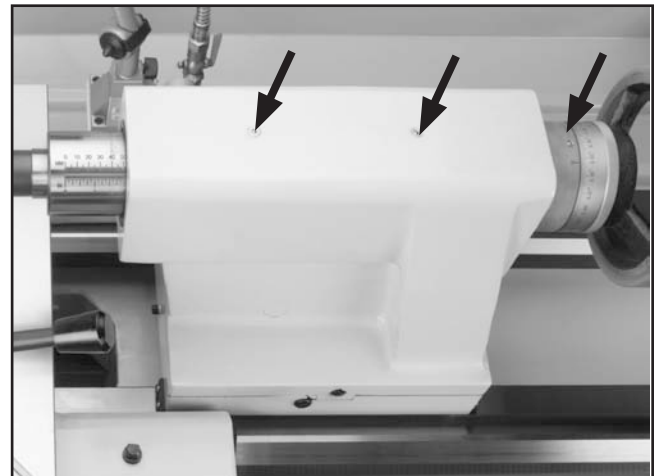
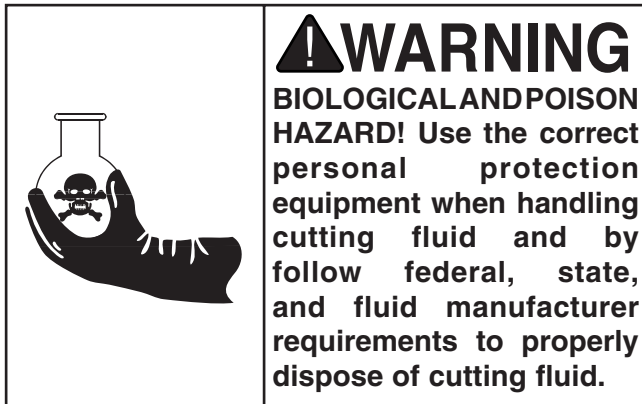


Figure 98. Tailstock ball oiler locations: 1 ball oiler on the tailstock handwheel hub and 2 ball oilers on the tailstock housing top.

Coolant System



The coolant pump and reservoir are located in the base behind the vented cover on the tailstock end of the lathe.

To perform regular maintenance on the cutting fluid system:

1. Remove the access cover at the rear of the lathe (**Figure 99**).

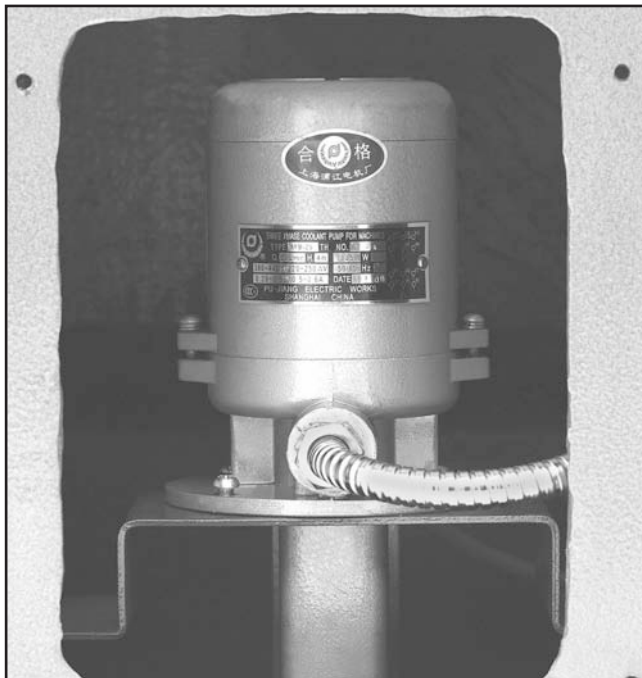


Figure 99. Coolant pump and reservoir.

2. Pump the old cutting fluid out of the reservoir and dispose of according to State and Federal Environmental Laws.
3. Using a magnet, brush, and rags clean out metal chips from the bottom of the reservoir. Flush with hot soapy water if required.
4. Refill the reservoir with applicable water-soluble cutting fluid. Closely follow the fluid manufacturer's instructions for mixing.
5. Open the valve on the coolant nozzle.
6. Turn the coolant pump **ON** (**Figure 100**) to prime the coolant system and to see if the coolant is cycling properly.
7. Replace the access cover.



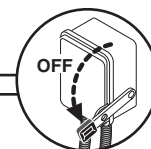
Figure 100. Coolant pump switch.



SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

Troubleshooting



Motor & Electrical

| Symptom | Possible Cause | Possible Solution |
|---|---|--|
| Machine does not start or a circuit breaker trips. | <ol style="list-style-type: none"> 1. Foot brake is engaged. 2. Emergency stop push-button is engaged/faulty. 3. Power supply is at fault/switched OFF. 4. Fuse has blown. 5. Plug/receptacle is at fault or wired incorrectly. 6. Start capacitor is at fault. 7. Motor connection wired incorrectly. 8. Thermal overload relay has tripped. 9. Contactor not getting energized/has burnt contacts. 10. Wall fuse/circuit breaker is blown/tripped. 11. Motor ON button or ON/OFF switch is at fault. 12. Wiring is open/has high resistance. 13. Motor is at fault. 14. Spindle rotation switch is at fault. 15. Foot brake safety switch is faulty. | <ol style="list-style-type: none"> 1. Check to see that foot brake is up. 2. Rotate clockwise slightly until it pops out/replace it. 3. Power supply is at fault/switched OFF. 4. Correct short/replace fuse in main electrical box. 5. Test for good contacts; correct the wiring. 6. Test/replace if faulty. 7. Correct motor wiring connections. 8. Turn cut-out dial to increase working amps and push the reset pin. Replace if tripped multiple times (weak relay). 9. Test for power on all legs and contactor operation. Replace unit if faulty. 10. Ensure correct size for machine load; replace weak breaker. 11. Replace faulty ON button or ON/OFF switch. 12. Check for broken wires or disconnected/corroded connections, and repair/replace as necessary. 13. Test/repair/replace. 14. Turn switch to FWD/REV; replace bad switch. 15. Test, replace if needed. |
| Loud, repetitious noise coming from machine at or near the motor. | <ol style="list-style-type: none"> 1. Pulley setscrews or keys are missing or loose. 2. Motor fan is hitting the cover. | <ol style="list-style-type: none"> 1. Inspect keys and setscrews. Replace or tighten if necessary. 2. Tighten fan or shim cover, or replace items. |
| Motor overheats. | <ol style="list-style-type: none"> 1. Motor overloaded. 2. Air circulation through the motor restricted. | <ol style="list-style-type: none"> 1. Reduce load on motor. 2. Clean out motor to provide normal air circulation. |
| Motor is loud when cutting. Overheats or bogs down in the cut. | <ol style="list-style-type: none"> 1. Excessive depth of cut or feed rate. 2. RPM or feed rate wrong for cutting operation. 3. Cutting tool is dull. 4. Gear setup is too tight, causing them to bind. | <ol style="list-style-type: none"> 1. Decrease depth of cut or feed rate. 2. Refer to RPM feed rate chart for appropriate rates. 3. Sharpen or replace the cutting tool. 4. Readjust the gear setup with a small amount of backlash so the gears move freely and smoothly when the chuck is rotated by hand. |



Operation and Work Results

| Symptom | Possible Cause | Possible Solution |
|--|--|--|
| Entire machine vibrates excessively upon start-up and while running. | <ol style="list-style-type: none"> 1. Workpiece is unbalanced. 2. Loose or damaged belt(s). 3. V-belt pulleys are not properly aligned. 4. Worn or broken gear present. 5. Chuck or faceplate has become unbalanced. 6. Spindle bearings badly worn. | <ol style="list-style-type: none"> 1. Reinstall workpiece so it is as centered with the spindle bore as possible. 2. Tighten/replace the belt as necessary. 3. Align the V-belt pulleys. 4. Inspect gears and replace if necessary. 5. Rebalance chuck or faceplate; contact a local machine shop for help. 6. Replace spindle bearings. |
| Bad surface finish. | <ol style="list-style-type: none"> 1. Wrong RPM or feed rate. 2. Dull tooling or poor tool selection. 3. Too much play in gibs. 4. Tool too high. | <ol style="list-style-type: none"> 1. Adjust for appropriate RPM and feed rate. 2. Sharpen tooling or select a better tool for the intended operation. 3. Tighten gibs. 4. Lower the tool position. |
| Can't remove tapered tool from tailstock quill. | <ol style="list-style-type: none"> 1. Quill had not retracted all the way back into the tailstock. 2. Debris was not removed from taper before inserting into quill. | <ol style="list-style-type: none"> 1. Turn the quill handwheel until it forces taper out of quill. 2. Always make sure that taper surfaces are clean. |
| Cross slide, compound slide, or carriage feed has sloppy operation. | <ol style="list-style-type: none"> 1. Gibs are out of adjustment. 2. Handwheel is loose. 3. Lead screw mechanism worn or out of adjustment. | <ol style="list-style-type: none"> 1. Tighten gib screw(s). 2. Tighten handwheel fasteners. 3. Tighten any loose fasteners on lead screw mechanism. |
| Cross slide, compound slide, or carriage feed handwheel is hard to move. | <ol style="list-style-type: none"> 1. Gibs are loaded up with shavings, dust, or grime. 2. Gib screws are too tight. 3. Backlash setting too tight (cross slide only). 4. Bedways are dry. | <ol style="list-style-type: none"> 1. Remove gibs, clean ways/dovetails, lubricate, and readjust gibs. 2. Loosen gib screw(s) slightly, and lubricate bedways. 3. Slightly loosen backlash setting by loosening the locking screw and adjusting the spanner ring at the end of the handle. 4. Lubricate bedways and handles. |
| Cutting tool or machine components vibrate excessively during cutting. | <ol style="list-style-type: none"> 1. Tool holder not tight enough. 2. Cutting tool sticks too far out of tool holder; lack of support. 3. Gibs are out of adjustment. 4. Dull cutting tool. 5. Incorrect spindle speed or feed rate. | <ol style="list-style-type: none"> 1. Check for debris, clean, and retighten. 2. Reinstall cutting tool so no more than $\frac{1}{3}$ of the total length is sticking out of tool holder. 3. Tighten gib screws at affected component. 4. Replace or sharpen cutting tool. 5. Use the recommended spindle speed. |
| Inaccurate turning results from one end of the workpiece to the other. | <ol style="list-style-type: none"> 1. Headstock and tailstock are not properly aligned with each other. | <ol style="list-style-type: none"> 1. Realign the tailstock to the headstock spindle bore center line. |
| Chuck jaws won't move or don't move easily. | <ol style="list-style-type: none"> 1. Chips lodged in the jaws. | <ol style="list-style-type: none"> 1. Remove jaws, clean and lubricate chuck threads, and replace jaws. |
| Carriage won't feed. | <ol style="list-style-type: none"> 1. Gears are not all engaged. 2. Gears are broken. 3. Loose screw on the feed handle. | <ol style="list-style-type: none"> 1. Adjust gear positions. 2. Replace. 3. Tighten. |



Operation and Work Results

| Symptom | Possible Cause | Possible Solution |
|--|--|--|
| Carriage hard to move. | <ol style="list-style-type: none"> 1. Carriage lock is tightened down. 2. Chips have loaded up on bedways. 3. Bedways are dry and in need of lubrication. 4. Longitudinal stops are interfering. 5. Gibs are too tight. | <ol style="list-style-type: none"> 1. Check to make sure the carriage lock bolt is fully released. 2. Frequently clean away chips that load up during turning operations. 3. Lubricate bedways and handles. 4. Check to make sure that stops are floating and not hitting the center stop. 5. Loosen gib screw(s) slightly. |
| Gear change levers will not shift into position. | <ol style="list-style-type: none"> 1. Gears not aligned in headstock. | <ol style="list-style-type: none"> 1. Rotate spindle by hand until gear falls into place. |
| Loud, repetitious noise coming from machine. | <ol style="list-style-type: none"> 1. Gears not aligned in headstock or no backlash. 2. Broken gear or bad bearing. 3. Workpiece is hitting stationary object. | <ol style="list-style-type: none"> 1. Adjust gears and establish backlash. 2. Replace broken gear or bearing. 3. Stop lathe immediately and correct interference problem. |
| Tailstock quill will not feed out of tailstock. | <ol style="list-style-type: none"> 1. Quill lock knob is tightened down. | <ol style="list-style-type: none"> 1. Turn knob counterclockwise. |



Cross Slide Leadscrew Adjustment

Backlash is the amount of play found in a lead screw. It can be found by turning the cross slide handwheel in one direction, then turning the handwheel the other direction. When the cross slide begins to move, the backlash has been taken up.

Note: Avoid the temptation to overtighten the cross slide backlash screw. Overtightening will cause excessive wear to the sliding block and lead screw. Reducing backlash to less than 0.001" is impractical and reduces cross slide life.

Backlash is adjusted by tightening or loosening the cap screws shown in **Figure 101**. These screws draw a wedge-type nut against the lead screw and main nut. If you get the gib too tight, loosen the cap screws a few turns, tap the cross slide a few times with a rubber or wooden mallet, and turn the handle slowly back and forth until the handle turns freely. To readjust the backlash, rock the handle back and forth and tighten the screw slowly until the backlash is at approximately 0.001" as indicated on the handwheel dial.

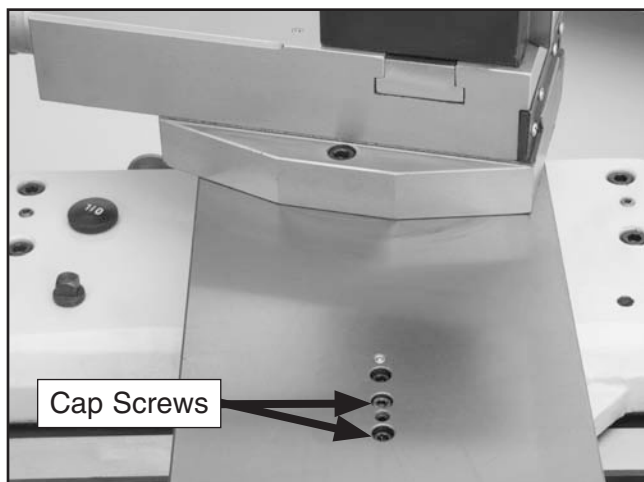


Figure 101. Cross slide backlash adjustment socket head cap screws.

Leadscrew Endplay Adjustment

After a long period of time, you may find that the lead screw for threading operations may develop a bit of end play. This lathe is designed so that play can be removed.

To remove leadscrew end play:

1. DISCONNECT LATHE FROM POWER.
2. Using a 4mm hex wrench, remove the three cap screws and the cover (**Figure 102**).
3. Using a 3mm hex wrench, loosen the retainer set screw (**Figure 102**).
4. Engage the halfnut lever and manually rotate the manual apron feed handwheel back and forth slightly to test for end play. While you are doing this, tighten the retainer until all leadscrew endplay is removed.
5. Tighten the set screw, reinstall the cover, and refill the housing with oil.

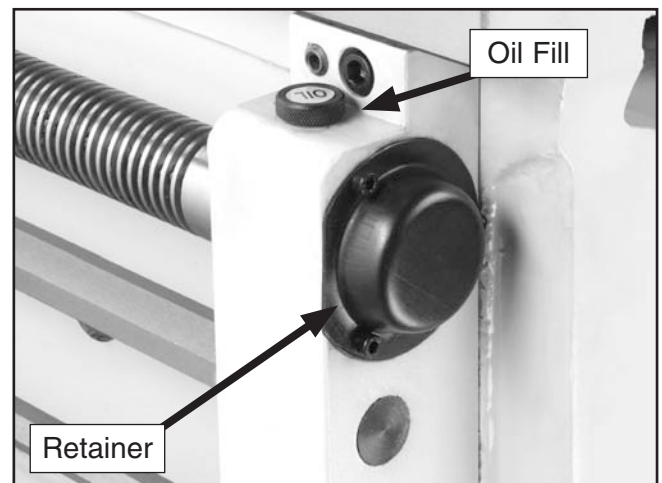


Figure 102. Leadscrew end play adjustment location.



Gib Adjustment

When adjusting the cross slide, tailstock, saddle, and compound rest gib screws (**Figures 103-106**), keep in mind that the goal is to remove sloppiness in the ways without causing the slides to bind. Loose gibs will cause a poor finish on the workpiece and may cause undue wear on the slide. Over-tightening may cause premature wear on the slide, lead screw, and nut.

The cross slide, tailstock, saddle, and compound rest gibs use a tapered piece of iron which is held in position by two gib screws at opposing ends of the gib. When these opposing front and rear gib adjustment screws are turned in opposite directions from each other, "One screw clockwise and the other counterclockwise, or visa versa" the single gib will be pushed fore or aft to fill the loose void in the way. Thus, the play in the slide is removed. If more play is needed adjust the screws so the gib is moved and held in the opposite direction.

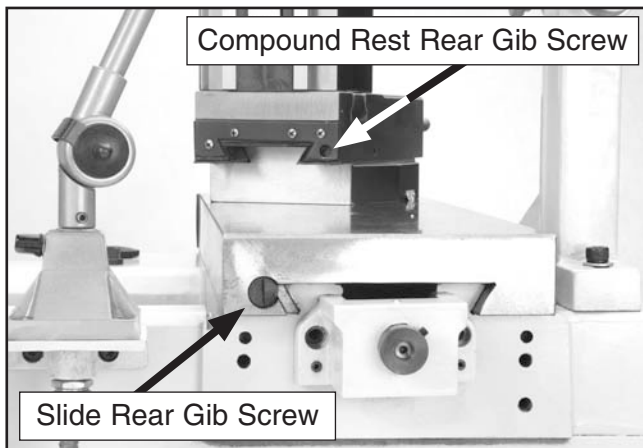


Figure 103. Rear cross slide and compound rest gib screw locations.



Figure 104. Left saddle gib screw.

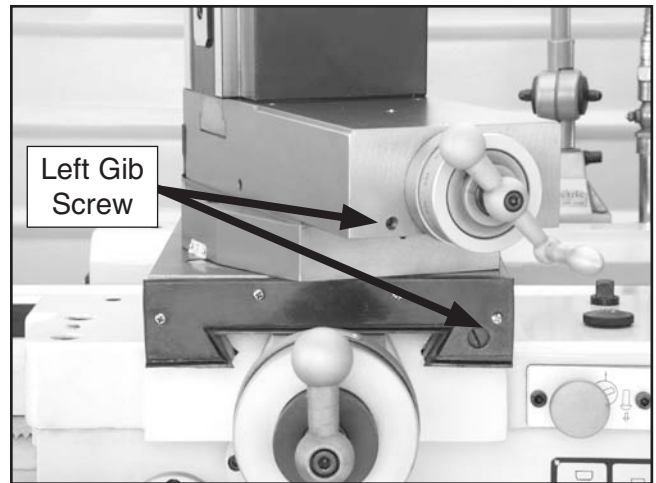


Figure 105. Front cross slide and compound rest gib screw locations.

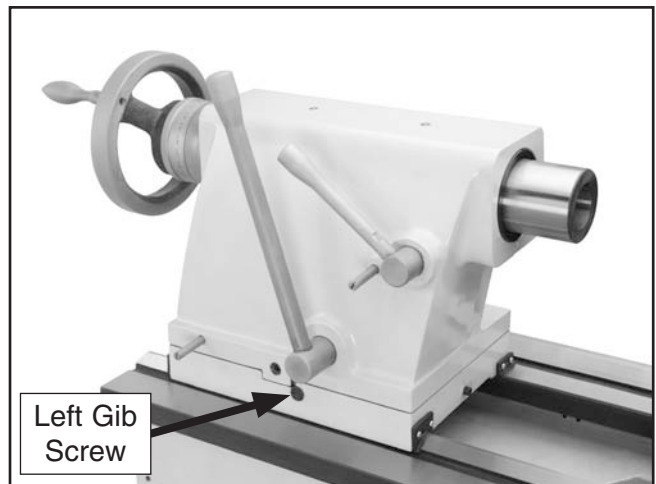


Figure 106. Tailstock gib screw location.

Halfnut Adjustment

When adjusting the halfnut gibs remove the thread dial to expose the two gib screws (**Figure 107**). Your goal is to remove sloppiness in the ways without causing the half nut to bind. You will loosen the jam nuts and turn the two set screws clockwise until slight tension is felt in the set screw. The gibs will then be slightly pre-loaded. Tighten the jam nuts when finished.

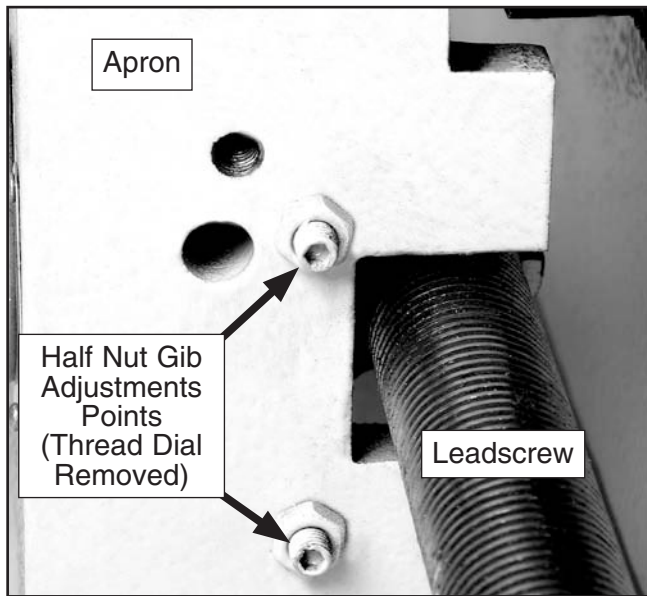


Figure 107. Halfnut gib adjustment.

Feed Clutch Adjustment

This lathe is designed with a feed clutch. This cone type clutch helps protect the apron feed system from overload. The feed clutch comes set from the factory. However, after the lathe becomes broken in, you may have to readjust this setting.

To adjust the clutch release point:

1. Using a 5mm hex wrench, turn the center cap screw clockwise to increase the clutch holding power, and turn counterclockwise to decrease the clutch holding power (**Figure 108**).
2. Start the lathe.
3. Engage the power feed and hold the longitudinal feed handwheel with one hand. The clutch should release within a few seconds without you fighting handwheel rotation. When it does, the holding force is approximately 12 kg.
4. Readjust the clutch screw as required to achieve the 12 kg setting.

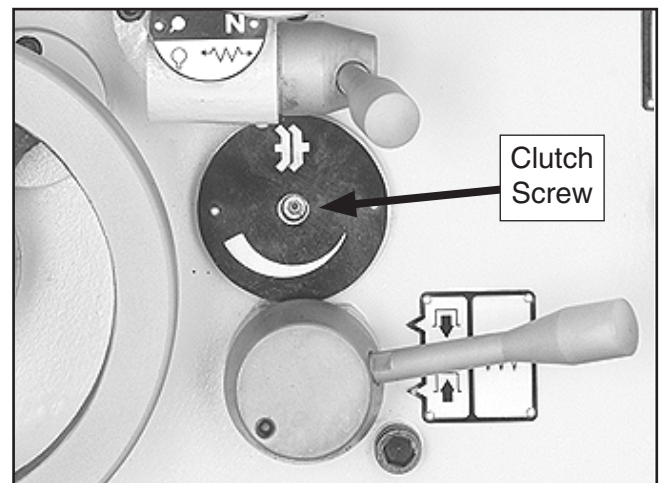


Figure 108. Feed clutch.



V-Belts

After consistent lathe usage, it will be necessary to compensate for belt wear.

To adjust or replace the V-belts on the lathe:

1. DISCONNECT LATHE FROM POWER!
2. Open rear cover on the lathe base (**Figure 109**).
3. Use a 24mm wrench and adjust the belt tension hex nuts (see **Figure 109**) there is approximately 10mm belt deflection on each belt when pressed firmly in the center in between the pulleys.

Note: Replace all three belts as a matched set even if one shows cracking, glazing, or fraying.

4. Reinstall the rear cover.

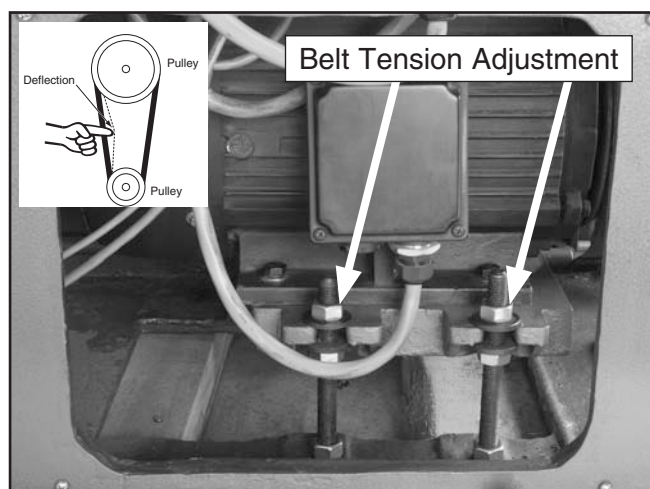


Figure 109. V-belt adjustment.

Brake and Switch

After consistent lathe usage, it will be necessary to compensate for brake lining wear.

To adjust the brake and brake switch:

1. DISCONNECT LATHE FROM POWER!
2. Remove the side motor cover.
3. Use a 16mm wrench and adjust the brake rod (**Figure 110**) so, when the foot pedal is pressed, the brake band firmly clamps the drum. When released the brake band should be loose on the drum.

Note: Replace the brake band when the friction material is worn down to approximately 2mm thick.

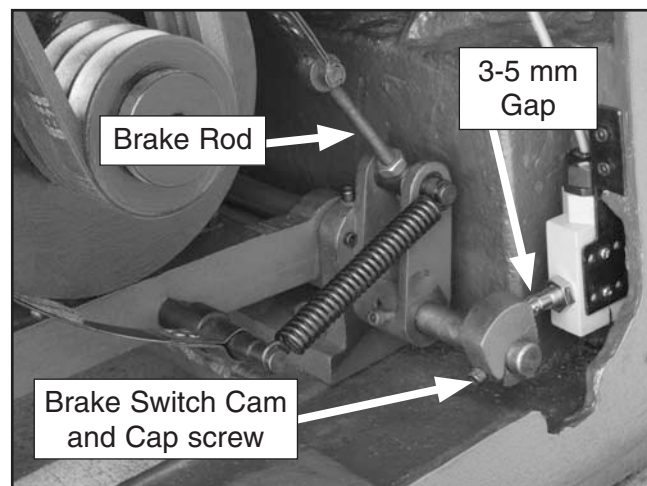


Figure 110. Brake band and switch.

4. Use a 5mm hex wrench and adjust the brake switch cam so when in the released position, there is 3 to 5mm gap between the cam and the brake switch pushrod (**Figure 110**).
5. Reinstall safety cover and test foot brake operation.



Control Panel Electrical

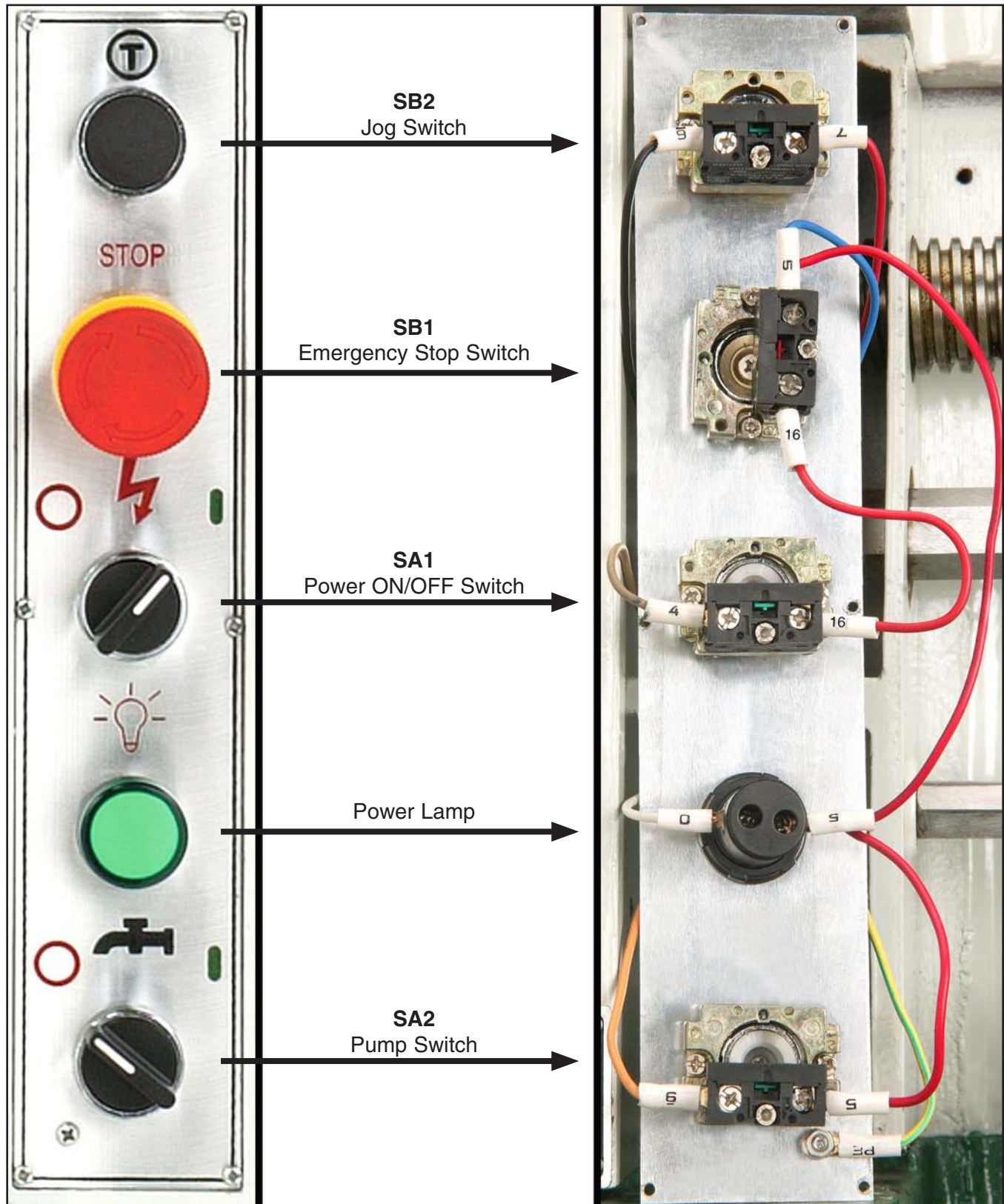


Figure 111. Control panel switches.



Switch and Motor Electrical

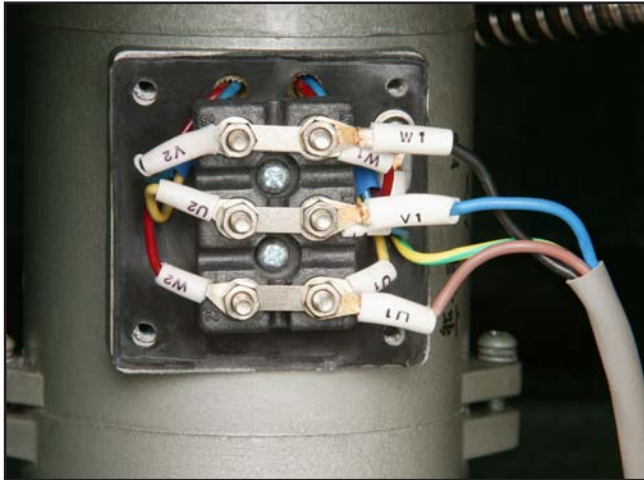


Figure 112. Pump wiring (M2).

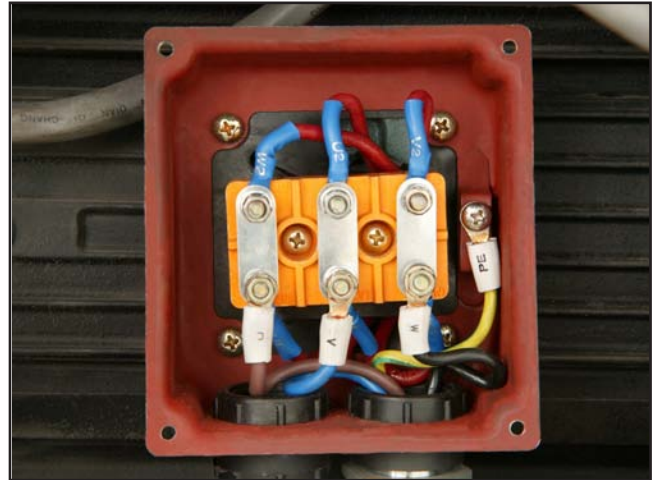


Figure 115. Spindle motor wiring (M1).



Figure 113. Spindle rotation switch (SQ1, SQ2).

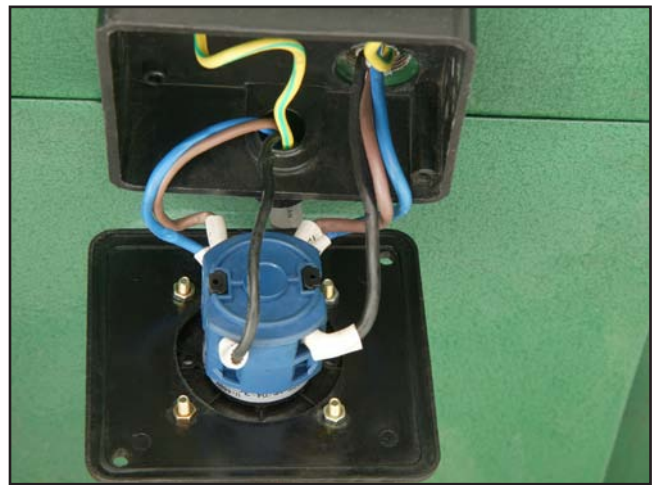


Figure 116. Main power switch (S).

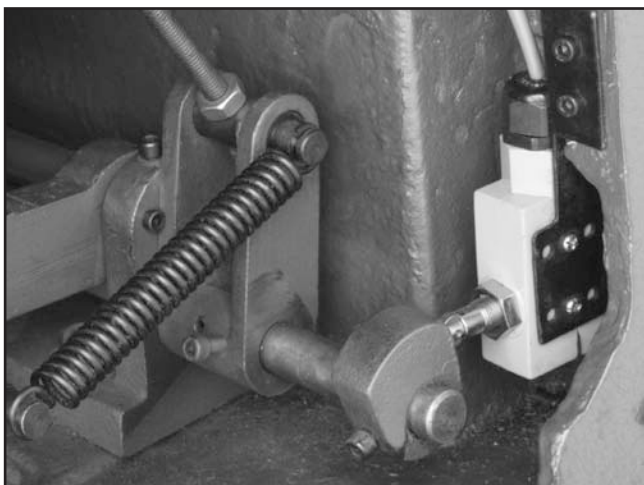


Figure 114. Brake switch (SQ4).



Figure 117. Gear cover limit switch (SQ3).



Main Electrical Box

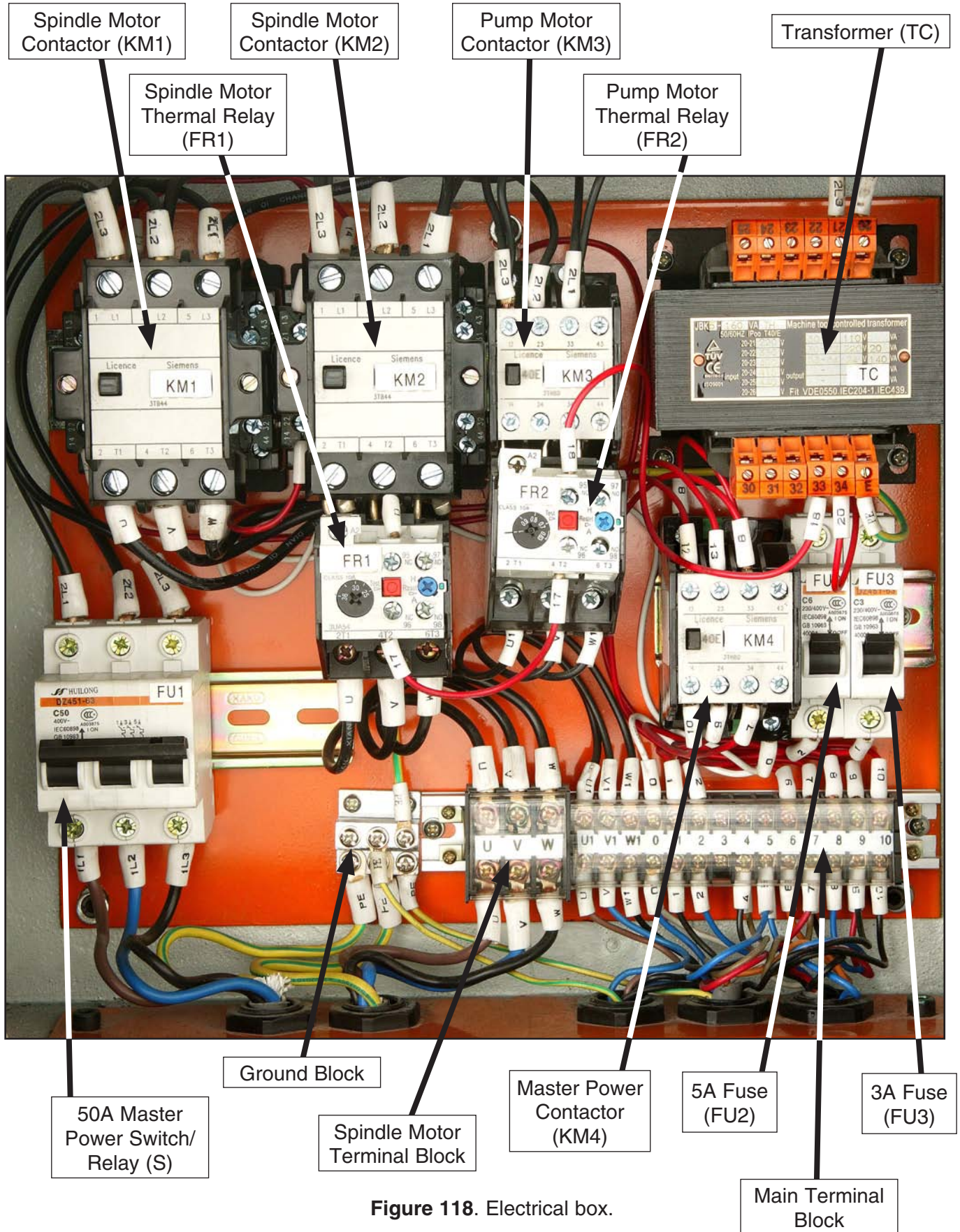


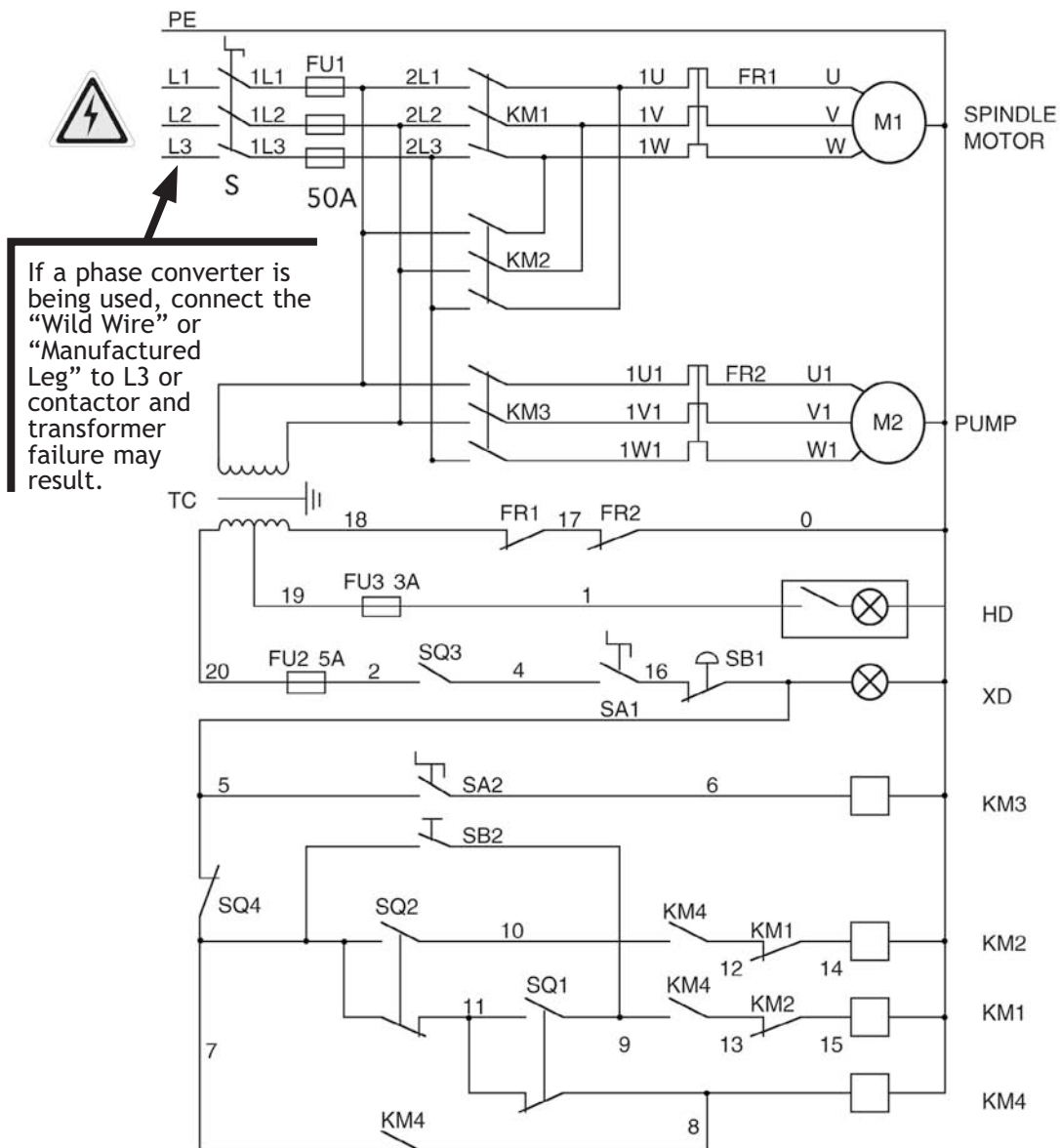
Figure 118. Electrical box.



Model G0600 Electrical Diagram

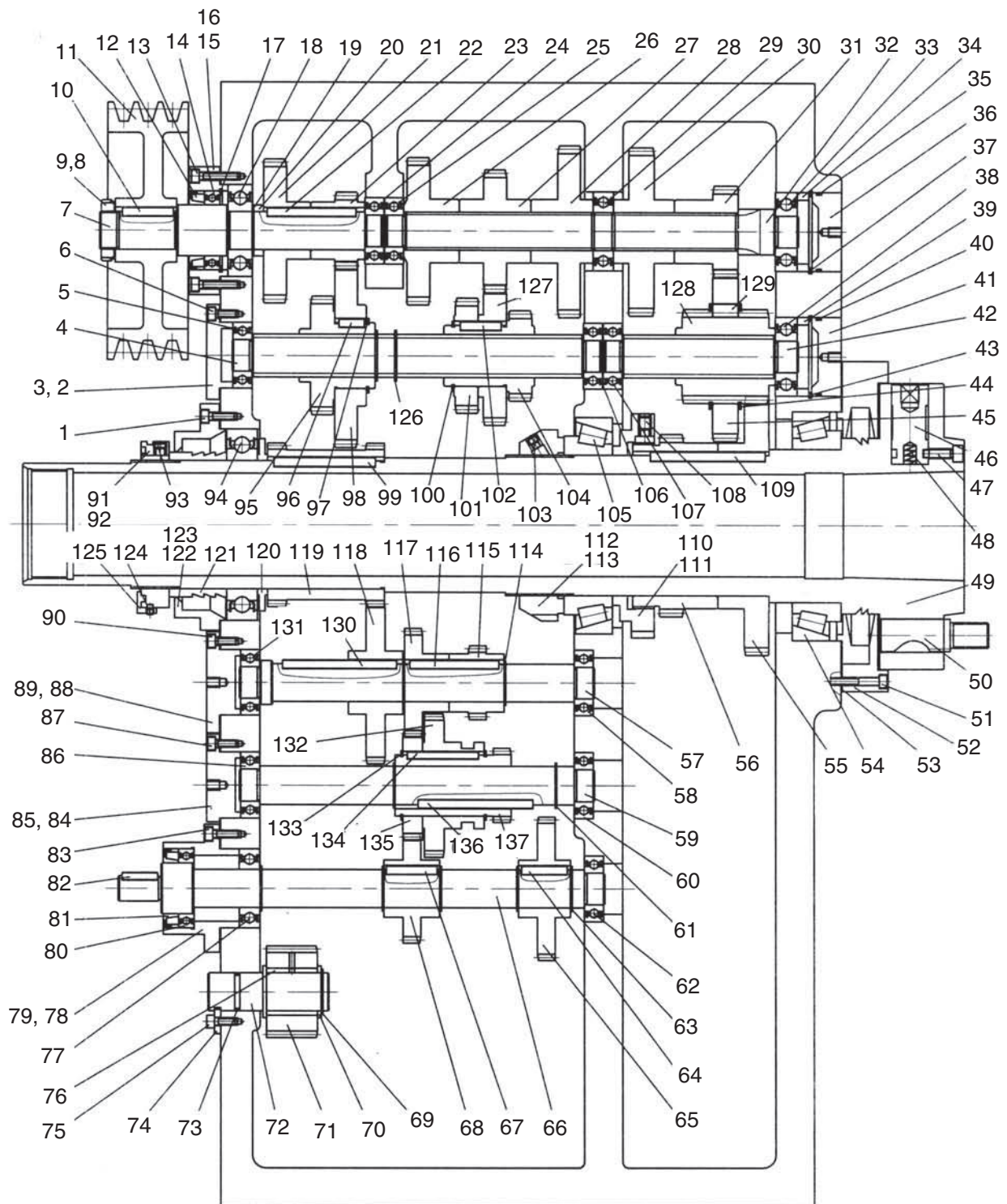


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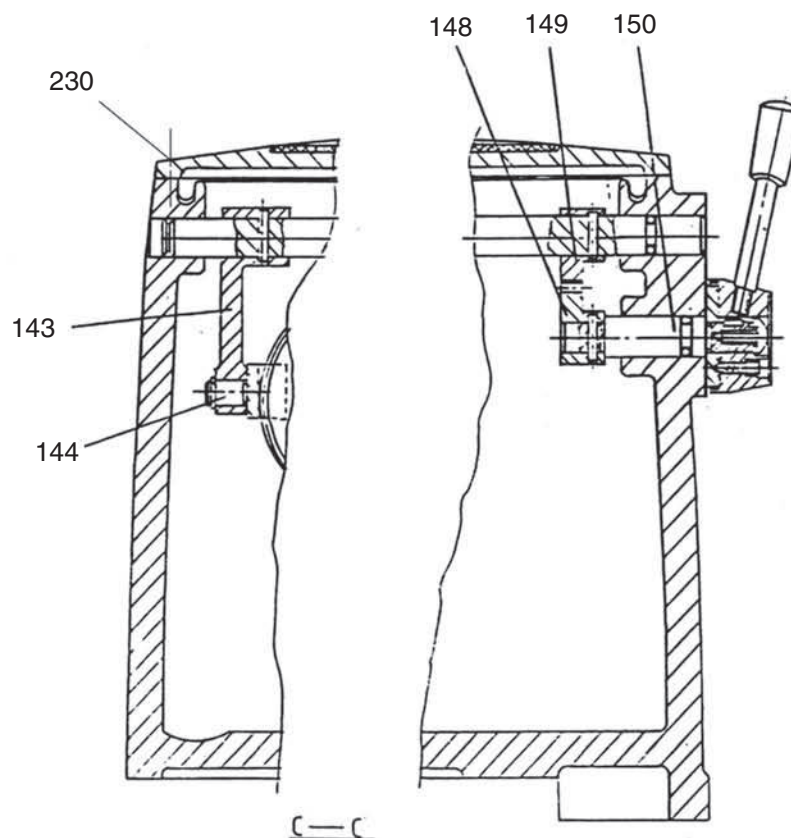
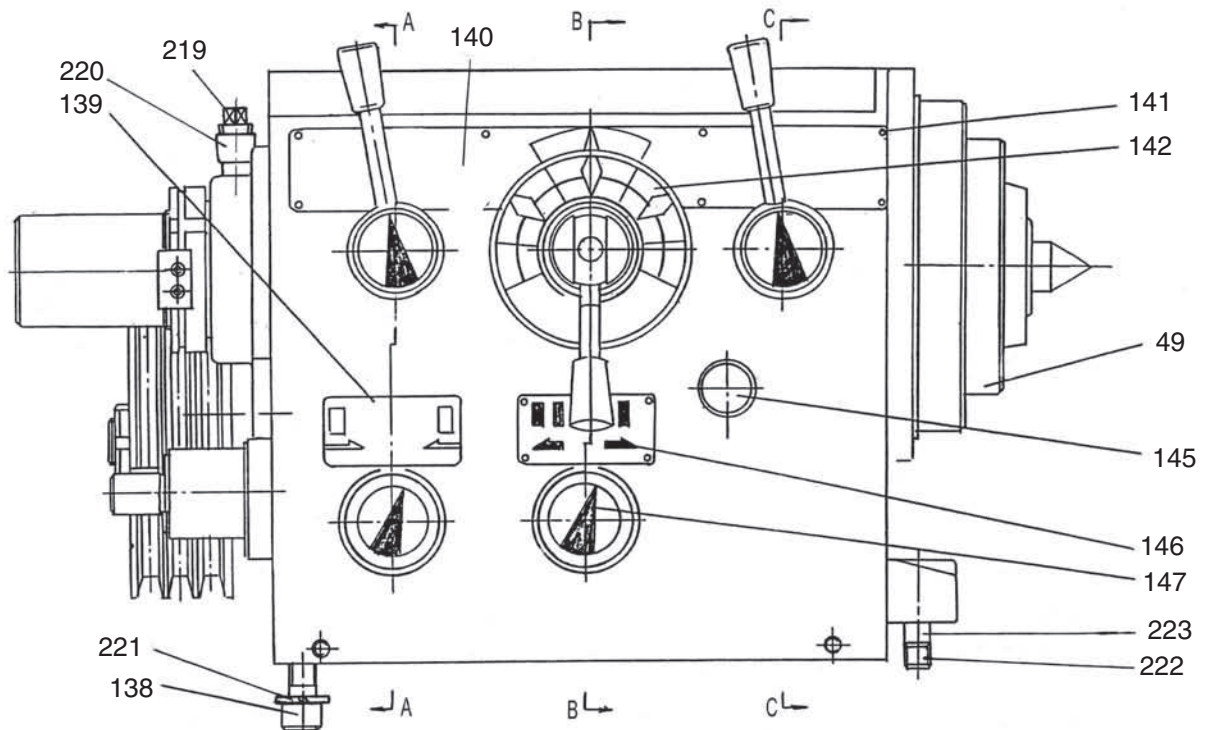


Headstock Gear System

(0000 Series Parts)

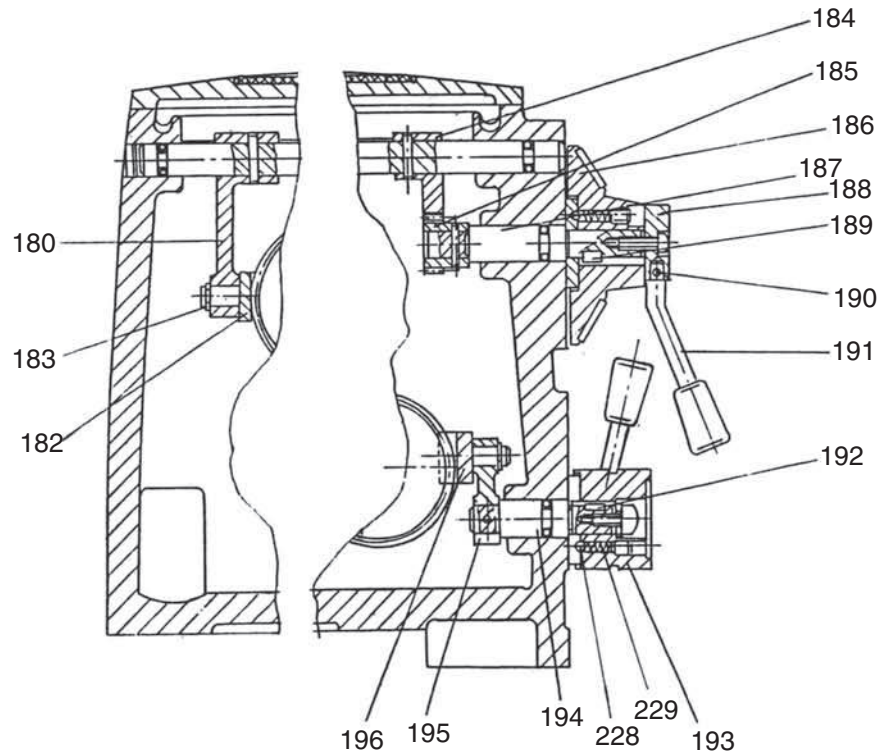


Headstock Face and Shift System (0000 Series Parts)

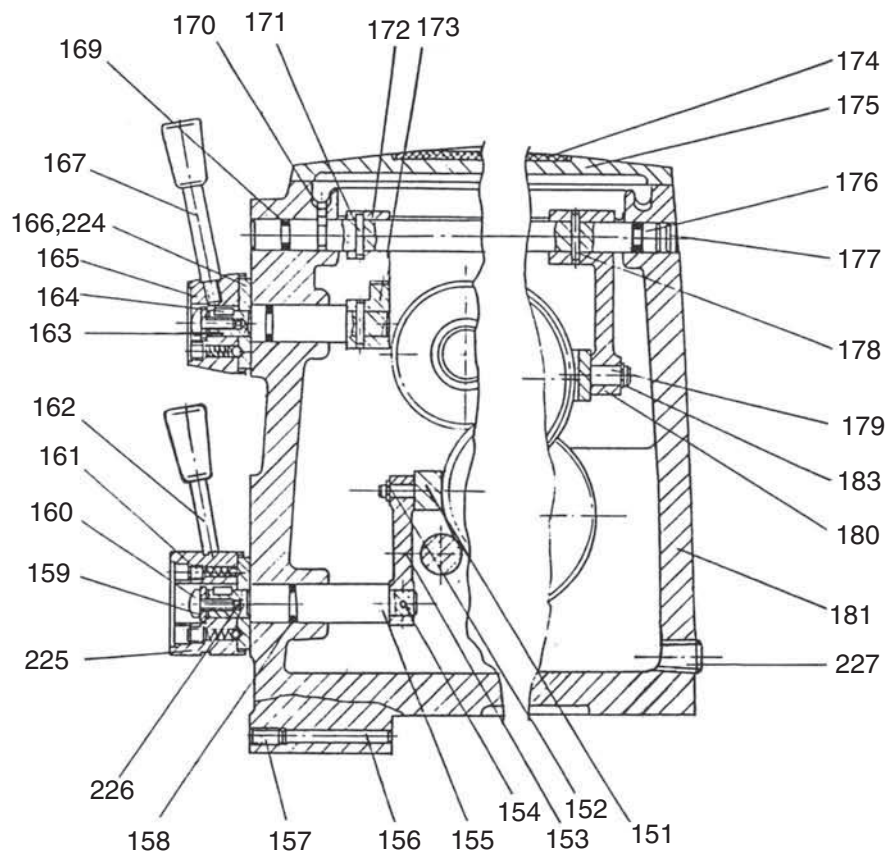


Headstock Shift System

(0000 Series Parts)

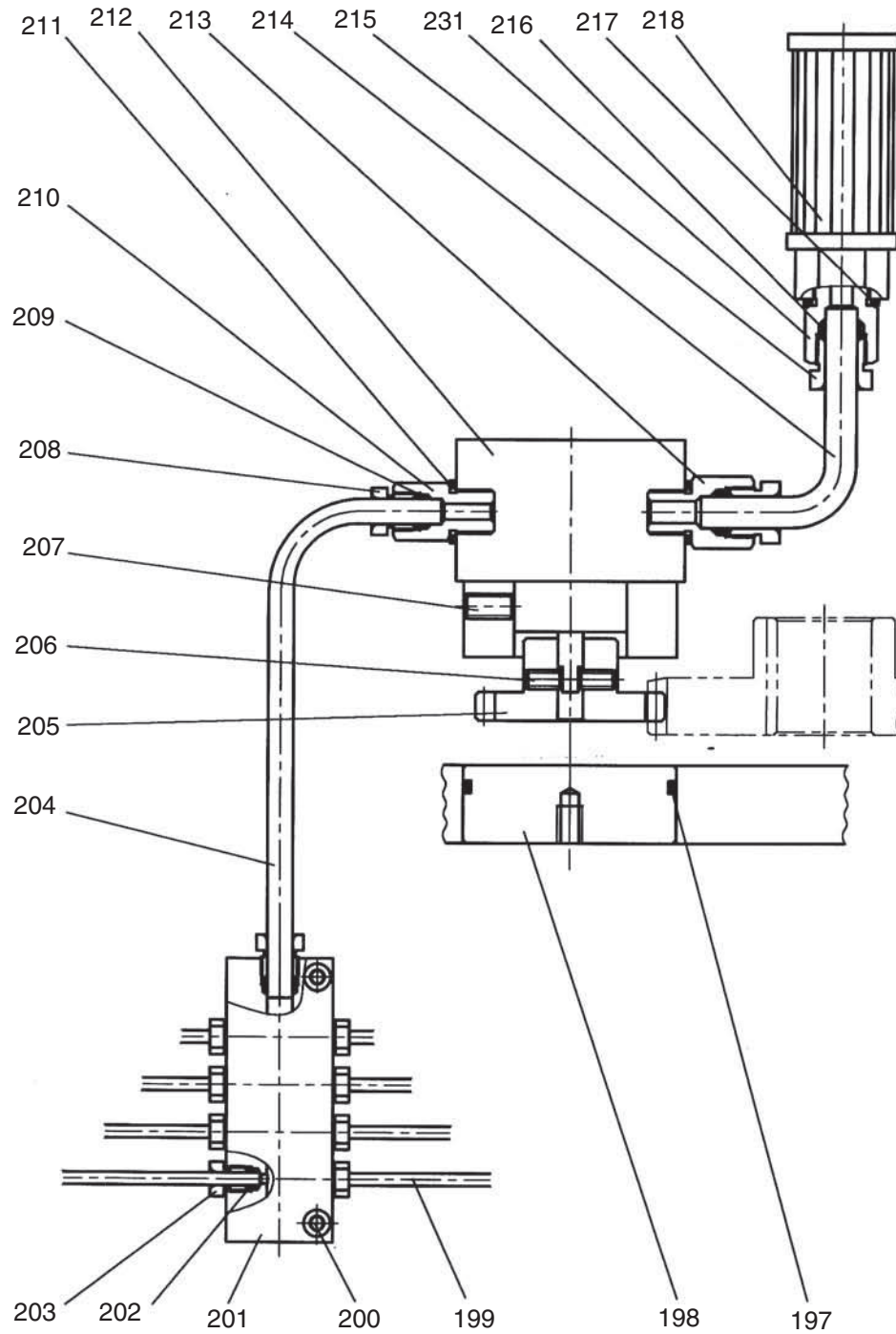


B-B



Headstock Oil Pump System

(0000 Series Parts)



| REF | PART # | DESCRIPTION |
|-----|-----------|-------------------------|
| 1 | PSB02M | CAP SCREW M6-1 X 20 |
| 2 | P06000002 | BEARING COVER |
| 3 | P06000003 | BEARING COVER SEAL |
| 4 | P06000004 | SPLINE SHAFT |
| 5 | P6205 | BALL BEARING 6205 |
| 6 | PSB01M | CAP SCREW M6-1 X 16 |
| 7 | P06000007 | INPUT SHAFT |
| 8 | P06000008 | SPANNER NUT M30 X 1.5 |
| 9 | P06000009 | LOCK WASHER 30MM |
| 10 | PK41M | KEY 8 X 8 X 40MM |
| 11 | P06000011 | PULLEY |
| 12 | P06000012 | OIL SEAL |
| 13 | PSB07M | CAP SCREW M6-1 X 30 |
| 14 | P06000014 | BALL BEARING 1080908 |
| 15 | P06000015 | BEARING CAP |
| 16 | P06000016 | BEARING SEAT SEAL |
| 17 | PR38M | INT RETAINING RING 62MM |
| 18 | P6306 | BALL BEARING 6306 |
| 19 | PR15M | EXT RETAINING RING 30MM |
| 20 | P06000020 | SPACER |
| 21 | P06000021 | GEAR 39T X M2.75 |
| 22 | P06000022 | KEY 8 X 8 X 70MM |
| 23 | P06000023 | GEAR 20T X M2.75 |
| 24 | P06000024 | SPACER |
| 25 | P6205 | BALL BEARING 6205 |
| 26 | P06000026 | GEAR 40T X M2.75 |
| 27 | P06000027 | GEAR 33T X M2.75 |
| 28 | P06000028 | GEAR 47T X M2.75 |
| 29 | P6206 | BALL BEARING 6206 |
| 30 | P06000030 | GEAR 46T X M2.75 |
| 31 | P06000031 | GEAR 24T X M2.75 |
| 32 | P06000032 | SPLINE SHAFT |
| 33 | P6305 | BALL BEARING 6305 |
| 34 | P06000034 | SPACER WASHER |
| 35 | P06000035 | O-RING 56 X 2.65MM |
| 36 | P06000036 | COVER |
| 37 | PR38M | INT RETAINING RING 62MM |
| 38 | P6305 | BALL BEARING 6305 |
| 39 | P06000039 | LOCK WASHER |
| 40 | P06000040 | O-RING 56 X 2.65MM |
| 41 | P06000041 | COVER |
| 42 | P06000042 | SPLINE SHAFT |
| 43 | PR38M | INT RETAINING RING 62MM |
| 44 | P06000044 | EXT RETAINING RING 75MM |
| 45 | P06000045 | GEAR 47T X M2.75 |
| 46 | P06000046 | D1-8 CAM LOCK |
| 47 | P06000047 | SPECIAL D1-8 SCREW |
| 48 | P06000048 | COMPRESSION SPRING |
| 49 | P06000049 | SPINDLE |
| 50 | P06000050 | D1-8 STUD |

| REF | PART # | DESCRIPTION |
|-----|-----------|--------------------------|
| 51 | PSB29M | CAP SCREW M6-1 X 40 |
| 52 | P06000052 | FRONT BEARING COVER |
| 53 | P06000053 | FRONT BEARING COVER SEAL |
| 54 | P06000054 | BALL BEARING D2007124E |
| 55 | P06000055 | GEAR 72T X M2.75 |
| 56 | P06000056 | GEAR 50T X M2.75 |
| 57 | P06000057 | SHAFT |
| 58 | P6205 | BALL BEARING 6205 |
| 59 | P06000059 | SHAFT |
| 60 | P6205 | BALL BEARING 6205 |
| 61 | PR15M | EXT RETAINING RING 30MM |
| 62 | P6205 | BALL BEARING 6205 |
| 63 | PR15M | EXT RETAINING RING 30MM |
| 64 | PK129M | KEY 8 X 8 X 36MM |
| 65 | P06000065 | GEAR 48T X M2.25 |
| 66 | P06000066 | OUTPUT SHAFT |
| 67 | PK41M | KEY 8 X 8 X 40MM |
| 68 | P06000068 | GEAR 36T X M2.25 |
| 69 | PR15M | EXT RETAINING RING 30MM |
| 70 | P06000070 | SPACER |
| 71 | P06000071 | GEAR 30T X M2.25 |
| 72 | P06000072 | IDLER SHAFT |
| 73 | P06000073 | O-RING 30 X 2.4MM |
| 74 | P06000074 | SPACER |
| 75 | PSB01M | CAP SCREW M6-1 X 16 |
| 76 | P06000076 | BRASS BUSHING |
| 77 | P6206 | BALL BEARING 6206 |
| 78 | P06000078 | BEARING SEAT |
| 79 | P06000079 | BEARING SEAT SEAL |
| 80 | P06000080 | BALL BEARING 1080908 |
| 81 | P06000081 | OIL SEAL |
| 82 | PK32M | KEY 6 X 6 X 28MM |
| 83 | PSB02M | CAP SCREW M6-1 X 20 |
| 84 | P06000084 | BEARING COVER |
| 85 | P06000085 | BEARING COVER SEAL |
| 86 | P6205 | BALL BEARING 6205 |
| 87 | PSB01M | CAP SCREW M6-1 X 16 |
| 88 | P06000088 | BEARING COVER |
| 89 | P06000089 | BEARING COVER SEAL |
| 90 | PSB01M | CAP SCREW M6-1 X 16 |
| 91 | P06000091 | LOCK NUT |
| 92 | P06000092 | BRASS BUSHING |
| 93 | PSS30M | SET SCREW M10-1.5 X 10 |
| 94 | P06000094 | BALL BEARING 120 |
| 95 | P06000095 | GEAR 32T X M2.75 |
| 96 | PK107M | KEY 8 X 8 X 20MM |
| 97 | PR26M | INT RETAINING RING 52MM |
| 98 | P06000098 | GEAR 51T X M2.75 |
| 99 | P06000099 | KEY 10 X 10 X 80MM |



| REF | PART # | DESCRIPTION |
|-----|-----------|------------------------------|
| 100 | PR32M | EXT RETAINING RING 48MM |
| 101 | P06000101 | GEAR 31T X M2.75 |
| 102 | PK09M | KEY 8 X 8 X 32MM |
| 103 | PSS16M | SET SCREW M8-1.25 X 10 |
| 104 | P06000104 | GEAR 24T X M2.75 |
| 105 | P06000105 | BALL BEARING D2007122E |
| 106 | P06000106 | SPACER |
| 107 | P6205 | BALL BEARING 6205 |
| 108 | PSS75M | SET SCREW M10-1.5 X 16 |
| 109 | P06000109 | KEY 10 X 10 X 90MM |
| 110 | P06000110 | LOCK NUT |
| 111 | P06000111 | BRASS BUSHING |
| 112 | P06000112 | LOCK NUT |
| 113 | P06000113 | BRASS BUSHING |
| 114 | PR15M | EXT RETAINING RING 30MM |
| 115 | P06000115 | GEAR 24T X M2.25 |
| 116 | P06000116 | KEY 8 X 8 X 70MM |
| 117 | P06000117 | GEAR 36T X M2.25 |
| 118 | P06000118 | GEAR 55T X M2.25 |
| 119 | P06000119 | GEAR 55T X M2.25/55T X M2.25 |
| 120 | P06000120 | SHAFT RING |
| 121 | P06000121 | OIL RING |
| 122 | P06000122 | REAR BEARING COVER |
| 123 | P06000123 | BEARING COVER SEAL |
| 124 | PSS03M | SET SCREW M6-1 X 8 |
| 125 | P06000125 | COUNTERWEIGHT |
| 126 | P06000126 | EXT RETAINING RING 34MM |
| 127 | P06000127 | GEAR 38T X M2.75 |
| 128 | P06000128 | GEAR 25T X M2.75 |
| 129 | P06000129 | KEY |
| 130 | P06000130 | KEY 8 X 8 X 90MM |
| 131 | P6205 | BALL BEARING 6205 |
| 132 | P06000132 | GEAR 48T X M2.25 |
| 133 | PR32M | EXT RETAINING RING 48MM |
| 134 | PK49M | KEY 6 X 6 X 55MM |
| 135 | P06000135 | GEAR 36T X M2.25 |
| 136 | P06000136 | KEY 8 X 8 X 90MM |
| 137 | P06000137 | GEAR 24T X M2.25 |
| 138 | P06000138 | CAP SCREW M16-2 X 55 |
| 139 | P06000139 | INDICATOR PLATE |
| 140 | P06000140 | INDICATOR PLATE |
| 141 | P06000141 | RIVET 2 X 5MM |
| 142 | P06000142 | INDICATOR PLATE |
| 143 | P06000143 | LEVER |
| 144 | P06000144 | FORK |
| 145 | P06000145 | OIL SIGHT GLASS |
| 146 | P06000146 | INDICATOR PLATE |
| 147 | P06000147 | POINTER PLATE |
| 148 | P06000148 | GEAR 31T X M2 |
| 149 | P06000149 | GEAR 35T X M2 |

| REF | PART # | DESCRIPTION |
|-----|-----------|------------------------|
| 150 | P06000150 | SHAFT |
| 151 | P06000151 | FORK |
| 152 | PEC03M | E-CLIP 10MM |
| 153 | P06000153 | LEVER |
| 154 | PRP26M | ROLL PIN 5 X 26MM |
| 155 | P06000155 | SHAFT |
| 156 | P06000156 | GUIDE PIN |
| 157 | P06000157 | SET SCREW M10-1.5 X 25 |
| 158 | P06000158 | O-RING 22 X 2.4MM |
| 159 | P06000159 | LOCK WASHER |
| 160 | P06000160 | SPECIAL DOME SCREW |
| 161 | PSS20M | SET SCREW M8-1.25 X 8 |
| 162 | P06000162 | LEVER |
| 163 | P06000163 | SHAFT |
| 164 | PK10M | KEY 5 X 5 X 12MM |
| 165 | P06000165 | HANDLE HUB |
| 166 | P06000166 | SPACER PLATE |
| 167 | P06000167 | LEVER |
| 169 | P06000169 | O-RING 20 X 2.4MM |
| 170 | PSS02M | SET SCREW M6-1 X 6 |
| 171 | PRP26M | ROLL PIN 5 X 26MM |
| 172 | P06000172 | GEAR 35T X M2 |
| 173 | P06000173 | GEAR 25T X M2 |
| 174 | P06000174 | RUBBER MAT |
| 175 | P06000175 | HEADSTOCK COVER |
| 176 | P06000176 | SHAFT |
| 177 | P06000177 | PLUG |
| 178 | PRP05M | ROLL PIN 5 X 30MM |
| 179 | P06000179 | FORK |
| 180 | P06000180 | LEVER |
| 181 | P06000181 | HEADSTOCK |
| 182 | P06000182 | FORK |
| 183 | PEC12M | E-CLIP 12MM |
| 184 | P06000184 | GEAR 42T X M2 |
| 185 | P06000185 | GEAR 18T X M2 |
| 186 | P06000186 | HUB |
| 187 | P06000187 | SHAFT |
| 188 | P06000188 | HANDLE LEVER BLOCK |
| 189 | PK10M | KEY 5 X 5 X 12MM |
| 190 | PRP39M | ROLL PIN 4 X 20MM |
| 191 | P06000191 | LEVER |
| 192 | PK10M | KEY 5 X 5 X 12MM |
| 193 | P06000193 | HANDLE HUB |
| 194 | P06000194 | SHAFT |
| 195 | P06000195 | LEVER |
| 196 | P06000196 | FORK |
| 197 | P06000197 | O-RING 68 X 3.1MM |
| 198 | P06000198 | COVER |
| 199 | P06000199 | BRASS TUBE 4 X 0.75" |



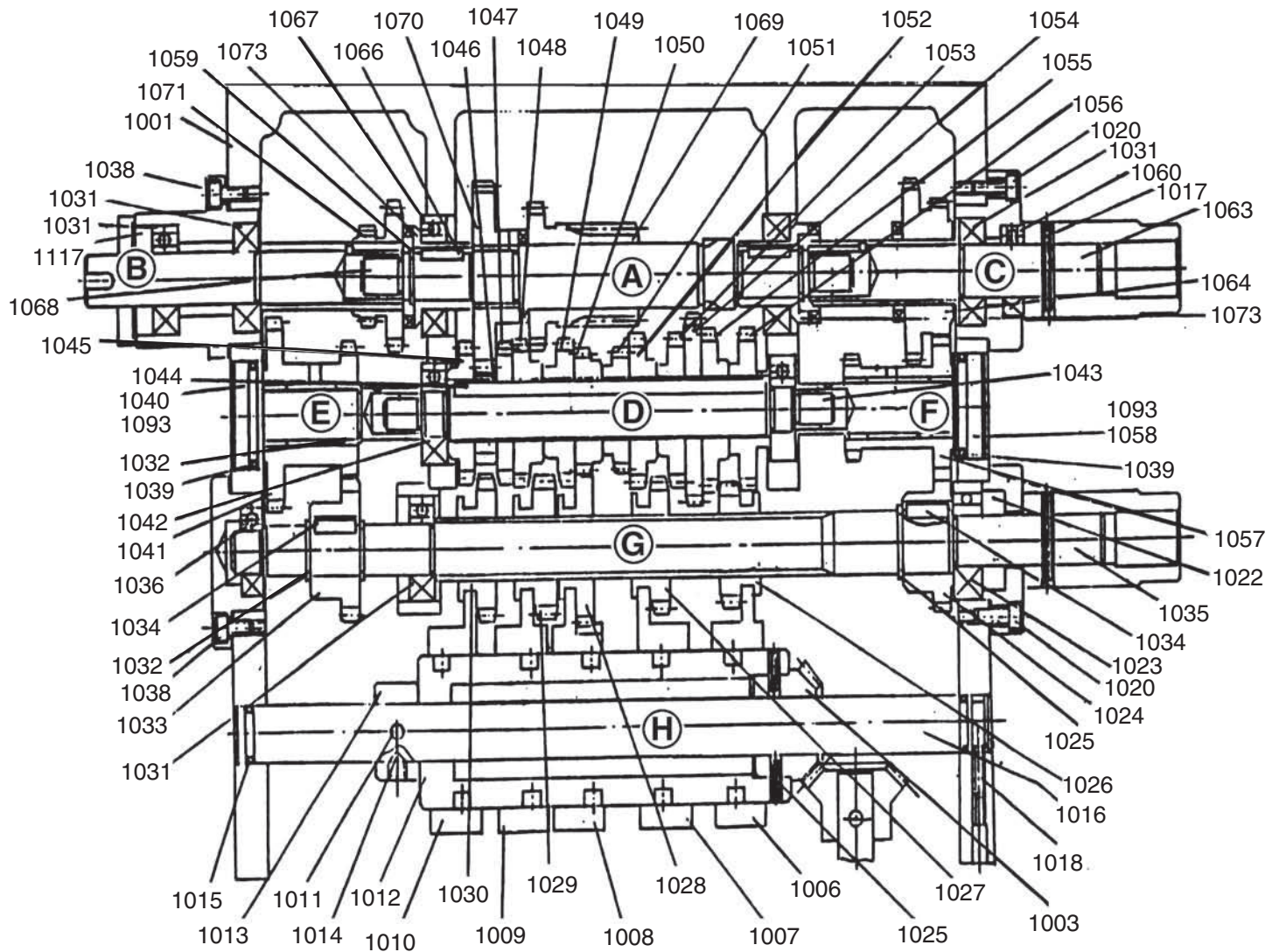
| REF | PART # | DESCRIPTION |
|-----|-----------|-----------------------|
| 200 | PSB38M | CAP SCREW M5-.8 X 25 |
| 201 | P06000201 | MANIFOLD |
| 202 | P06000202 | SEAL SLEEVE |
| 203 | P06000203 | BRASS FITTING |
| 204 | P06000204 | BRASS TUBE 8 X 0.75" |
| 205 | P06000205 | GEAR 20T X M2.75 |
| 206 | PSB26M | CAP SCREW M6-1 X 12 |
| 207 | PSB01M | CAP SCREW M6-1 X 16 |
| 208 | P06000208 | BRASS FITING |
| 209 | P06000209 | SEALING SLEEVE |
| 210 | P06000210 | BRASS FITTING |
| 211 | P06000211 | SEAL WASHER |
| 212 | P06000212 | OIL PUMP |
| 213 | P06000213 | BRASS FITTING |
| 214 | P06000214 | BRASS TUBE 10 X 0.75" |
| 215 | P06000215 | BRASSS FITTING |

| REF | PART # | DESCRIPTION |
|-----|-----------|------------------------|
| 216 | P06000216 | SEAL SLEEVE |
| 217 | PLW12M | SEAL WASHER |
| 218 | P06000218 | SCREEN |
| 219 | P06000219 | PLUG |
| 220 | P06000220 | TUBE FITTING |
| 221 | PLW10M | LOCK WASHER 16MM |
| 222 | P06000222 | CAP SCREW M16-2 X 45 |
| 223 | P06000223 | ANCHOR PIN 16 X 60 |
| 224 | PSB01M | CAP SCREW M6-1 X 16 |
| 225 | P06000225 | HANDLE HUB |
| 226 | PS22M | PHLP HD SCR M5-.8 X 25 |
| 227 | P06000227 | OIL PLUG |
| 228 | P06000228 | STEEL BALL 1/4" |
| 229 | P06000229 | COMPRESSION SPRING |
| 230 | PSB14M | CAP SCREW M8-1.25 X 20 |
| 231 | P06000231 | BRASS FITTING |



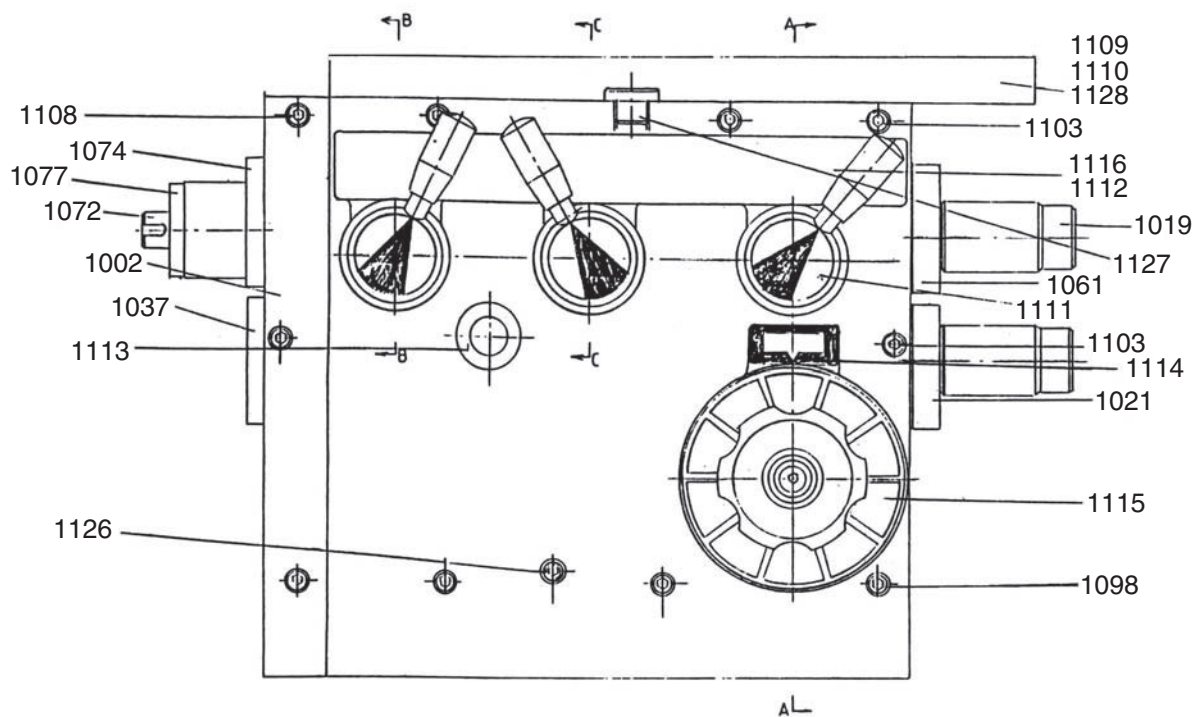
Quick Change Gearbox Gear System

(1000 Series Series Parts)



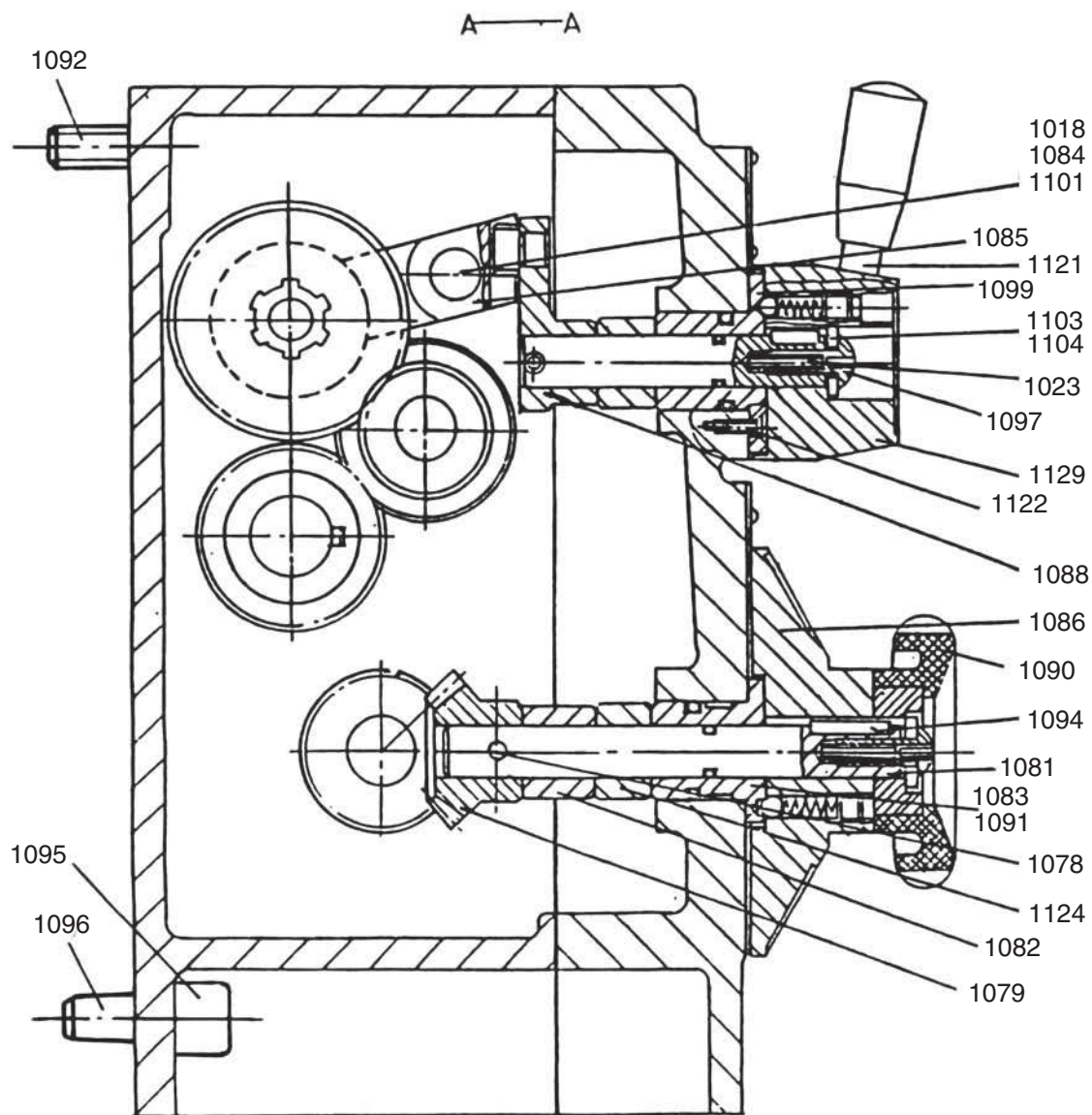
Quick Change Gearbox Face

(1000 Series Parts)



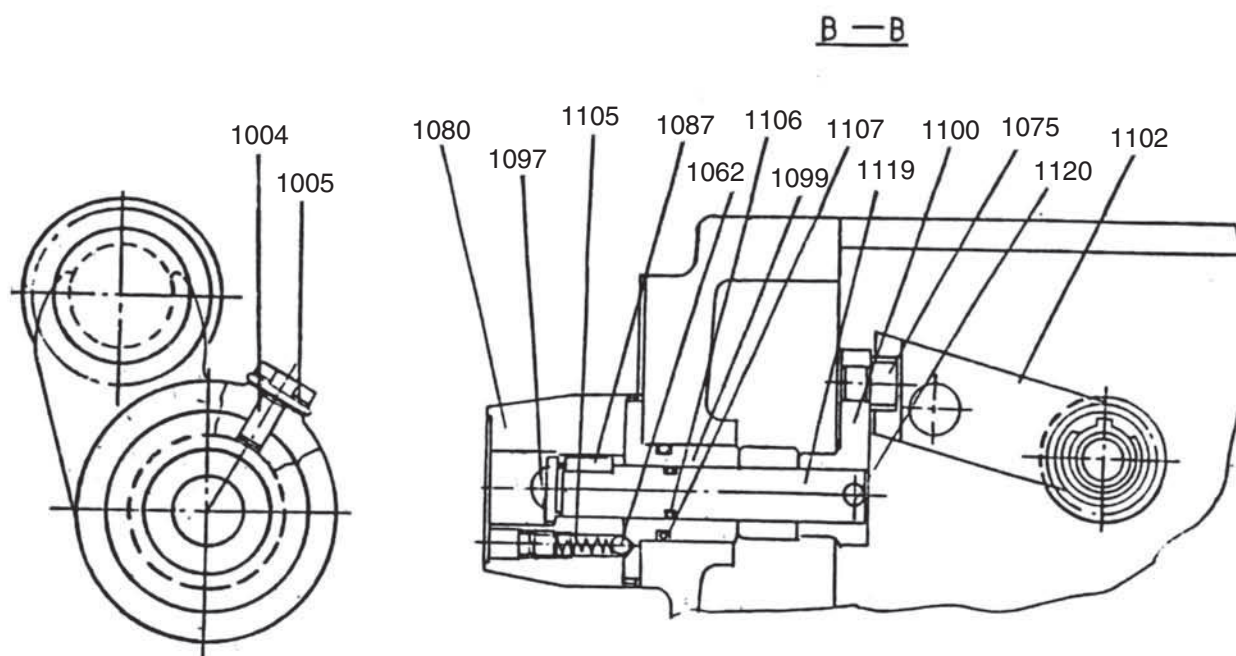
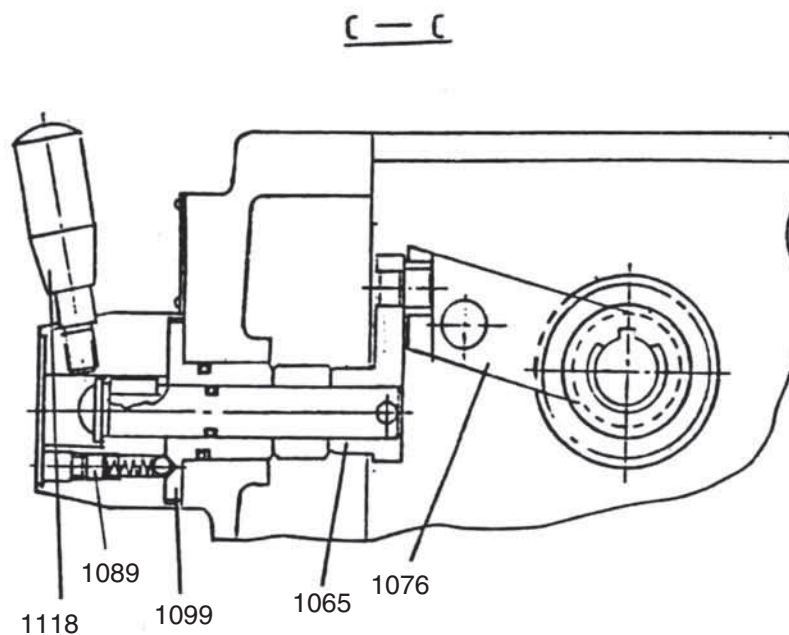
Quick Change Gearbox Shift System

(1000 Series Parts)



Quick Change Gearbox Shift System

(1000 Series Parts)



| REF | PART # | DESCRIPTION |
|------|-----------|------------------------------|
| 1001 | P06001001 | GEAR BOX |
| 1002 | P06001002 | FRONT COVER |
| 1003 | P06001003 | BEVEL GEAR |
| 1004 | P06001004 | HEX BOLT |
| 1005 | P06001005 | FLAT WASHER |
| 1006 | P06001006 | SHIFTER CLAW |
| 1007 | P06001007 | SHIFTER CLAW |
| 1008 | P06001008 | SHIFTER CLAW |
| 1009 | P06001009 | SHIFTER CLAW |
| 1010 | P06001010 | SHIFTER CLAW |
| 1011 | PRP91M | ROLL PIN 5 X 35MM |
| 1012 | P06001012 | CAM SHIFTER |
| 1013 | P06001013 | RETAINER |
| 1014 | PSS16M | SET SCREW M8-1.25 X 10 |
| 1015 | P06000158 | O-RING 22 X 2.4MM |
| 1016 | P06001016 | H-SHAFT |
| 1017 | PRP91M | ROLL PIN 5 X 35MM |
| 1018 | PSS25M | SET SCREW M6-1 X 20 |
| 1019 | P06001019 | RECEIVER HUB |
| 1020 | PSB02M | CAP SCREW M6-1 X 20 |
| 1021 | P06001021 | END CAP (RIGHT) |
| 1022 | P06001022 | OIL SEAL |
| 1023 | P06001023 | BALL BEARING 180204 |
| 1024 | P06001024 | GEAR 36T X M1.25 |
| 1025 | PR11M | EXT RETAINING RING 25MM |
| 1026 | P06001026 | GEAR 22T X 12D.P |
| 1027 | P06001027 | GEAR 22T X M2.25 |
| 1028 | P06001028 | GEAR 33T X 14D.P |
| 1029 | P06001029 | GEAR 22T X 11D.P |
| 1030 | P06001030 | GEAR 22T X 10D.P |
| 1031 | P06001031 | BALL BEARING 180104 |
| 1032 | P06001032 | EXT RETAINING RING 20MM |
| 1033 | P06001033 | GEAR 22T X 10D.P |
| 1034 | PK07M | KEY 6 X 6 X 20MM |
| 1035 | P06001035 | G-SHAFT |
| 1036 | P06001036 | BALL BEARING 180103 |
| 1037 | P06001037 | COVER |
| 1038 | PSB26M | CAP SCREW M6-1 X 12 |
| 1039 | P06001039 | O-RING 35 X 3.5MM |
| 1040 | P06001040 | E-SHAFT |
| 1041 | P06001041 | GEAR 20T X 10D.P/40T X 14D.P |
| 1042 | P06001042 | BALL BEARING 180203 |
| 1043 | P06001043 | D-SHAFT |
| 1044 | P06001044 | KEY 6 X 6 X 146MM |
| 1045 | P06001045 | GEAR 19T X 10D.P |
| 1046 | P06001046 | GEAR 18T X M2 |
| 1047 | P06001047 | GEAR 20T X 10D.P |
| 1048 | P06001048 | GEAR 22T X 11D.P |
| 1049 | P06001049 | GEAR 23T X 11D.P |
| 1050 | P06001050 | GEAR 24T X 14D.P |

| REF | PART # | DESCRIPTION |
|------|-----------|------------------------------|
| 1051 | P06001051 | GEAR 27T X 14D.P |
| 1052 | P06001052 | GEAR 24T X M2.25 |
| 1053 | P06001053 | GEAR 26T X M2.25 |
| 1054 | P06001054 | GEAR 36T X M2 |
| 1055 | P06001055 | GEAR 27T X 12D.P |
| 1056 | P06001056 | GEAR 28T X 12D.P |
| 1057 | P06001057 | GEAR 50T X M1.25/20T X M2 |
| 1058 | P06001058 | F-SHAFT |
| 1059 | PR07M | EXT RETAINING RING 18MM |
| 1060 | P06001060 | THRUST BEARING 8104 |
| 1061 | P06001061 | END CAP |
| 1062 | P06001062 | STEEL BALL 1/4" |
| 1063 | P06001063 | C-SHAFT |
| 1064 | P06001064 | GEAR 35T X M1.25/35T X M2 |
| 1065 | P06001065 | ARM |
| 1066 | PK48M | KEY 4 X 4 X 20MM |
| 1067 | P06001067 | BALL BEARING 180105 |
| 1068 | P06001068 | A-SHAFT |
| 1069 | P06001069 | GEAR 18T X M2/23T X 11D.P |
| 1070 | P06001070 | GEAR 36T X M2 |
| 1071 | P06001071 | GEAR 19T X 10D.P/19T X 14D.P |
| 1072 | P06001072 | B-SHAFT |
| 1073 | P06001073 | CLUTCH |
| 1074 | P06001074 | CAP |
| 1075 | P06001075 | FORK |
| 1076 | P06001076 | FORK |
| 1077 | P06001077 | SPACER |
| 1078 | PRP05M | ROLL PIN 5 X 30MM |
| 1079 | P06001079 | BEVEL GEAR |
| 1080 | P06001080 | SPEED CHANGE HUB |
| 1081 | P06001081 | LEVER HUB |
| 1082 | P06001082 | SPACER |
| 1083 | P06001083 | SHAFT SLEEVE |
| 1084 | P06001084 | O-RING 16 X 2.4MM |
| 1085 | P06001085 | SHIFT FORK |
| 1086 | P06001086 | DIAL HUB |
| 1087 | PK19M | KEY 5 X 5 X 14MM |
| 1088 | P06001088 | ARM |
| 1089 | P06001089 | CAP SCREW M8-1.25 X 8 |
| 1090 | P06001090 | HAND KNOB |
| 1091 | PSB40M | CAP SCREW M8-1.25 X 35 |
| 1092 | PSB71M | CAP SCREW M10-1.5 X 60 |
| 1093 | PSB01M | CAP SCREW M6-1 X 16 |
| 1094 | PK131M | KEY 5 X 5 X 28MM |
| 1095 | PSB72M | CAP SCREW M10-1.5 X 30 |
| 1096 | P06001096 | TAPER PIN 10 X 45MM |
| 1097 | P06001097 | SPECIAL DOME SCREW |
| 1098 | PSB49M | CAP SCREW M6-1 X 60 |
| 1099 | P06001099 | DETENT PLATE |



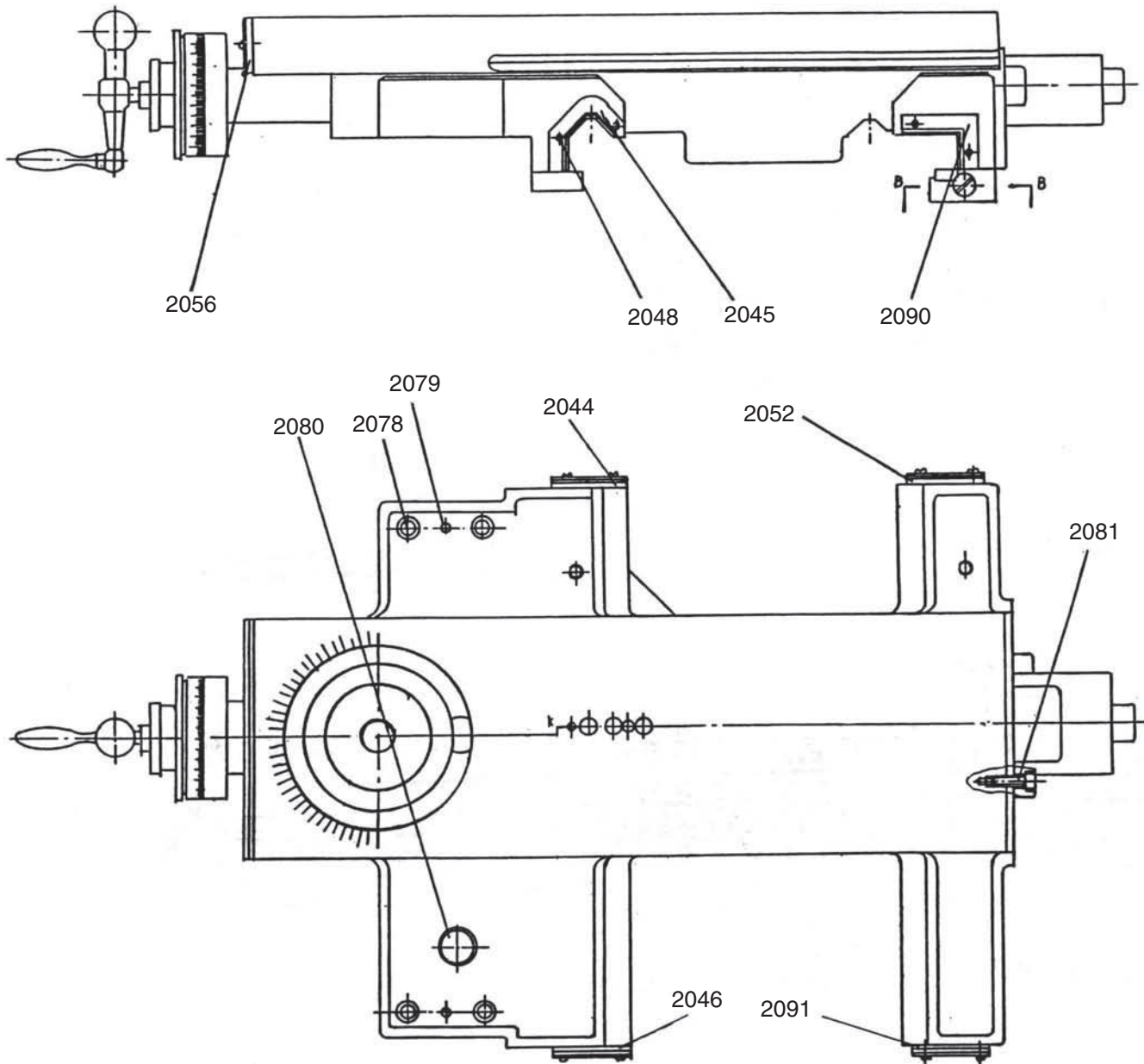
| REF | PART # | DESCRIPTION |
|------|-----------|---------------------|
| 1100 | P06001100 | ARM |
| 1101 | P06001101 | SHAFT |
| 1102 | P06001102 | FORK |
| 1103 | PSB37M | CAP SCREW M6-1 X 50 |
| 1104 | P06001104 | LOCK WASHER |
| 1105 | P06001105 | COMPRESSION SPRING |
| 1106 | P06001084 | O-RING 16 X 2.4MM |
| 1107 | P06000073 | O-RING 30 X 3.1MM |
| 1108 | PSB07M | CAP SCREW M6-1 X 30 |
| 1110 | PSB07M | CAP SCREW M6-1 X 30 |
| 1111 | P06001111 | POINTER PLATE |
| 1112 | P06001112 | INDICATOR PLATE |
| 1113 | P06001113 | OIL SIGHT GLASS |
| 1114 | P06001114 | INDICATOR PLATE |
| 1115 | P06001115 | INDICATOR PLATE |

| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 1116 | P06000141 | RIVET 2 X 5MM |
| 1117 | P06001117 | OIL-SEAL |
| 1118 | P06001118 | FEMALE KNOB M10-1.5 |
| 1119 | P06001119 | SHAFT |
| 1120 | PRP05M | ROLL PIN 5 X 30MM |
| 1121 | P06001121 | LEVER |
| 1122 | PS09M | PHLP HD SCR M5-.8 X 10 |
| 1123 | PS22M | PHLP HD SCR M5-.8 X 25 |
| 1124 | P06001124 | SPACER |
| 1125 | PRP24M | ROLL PIN 5 X 16MM |
| 1126 | P06001126 | OIL PLUG |
| 1127 | P06001127 | OIL PLUG |
| 1128 | P06001128 | TOP COVER |
| 1129 | P06001129 | HANDLE HUB |



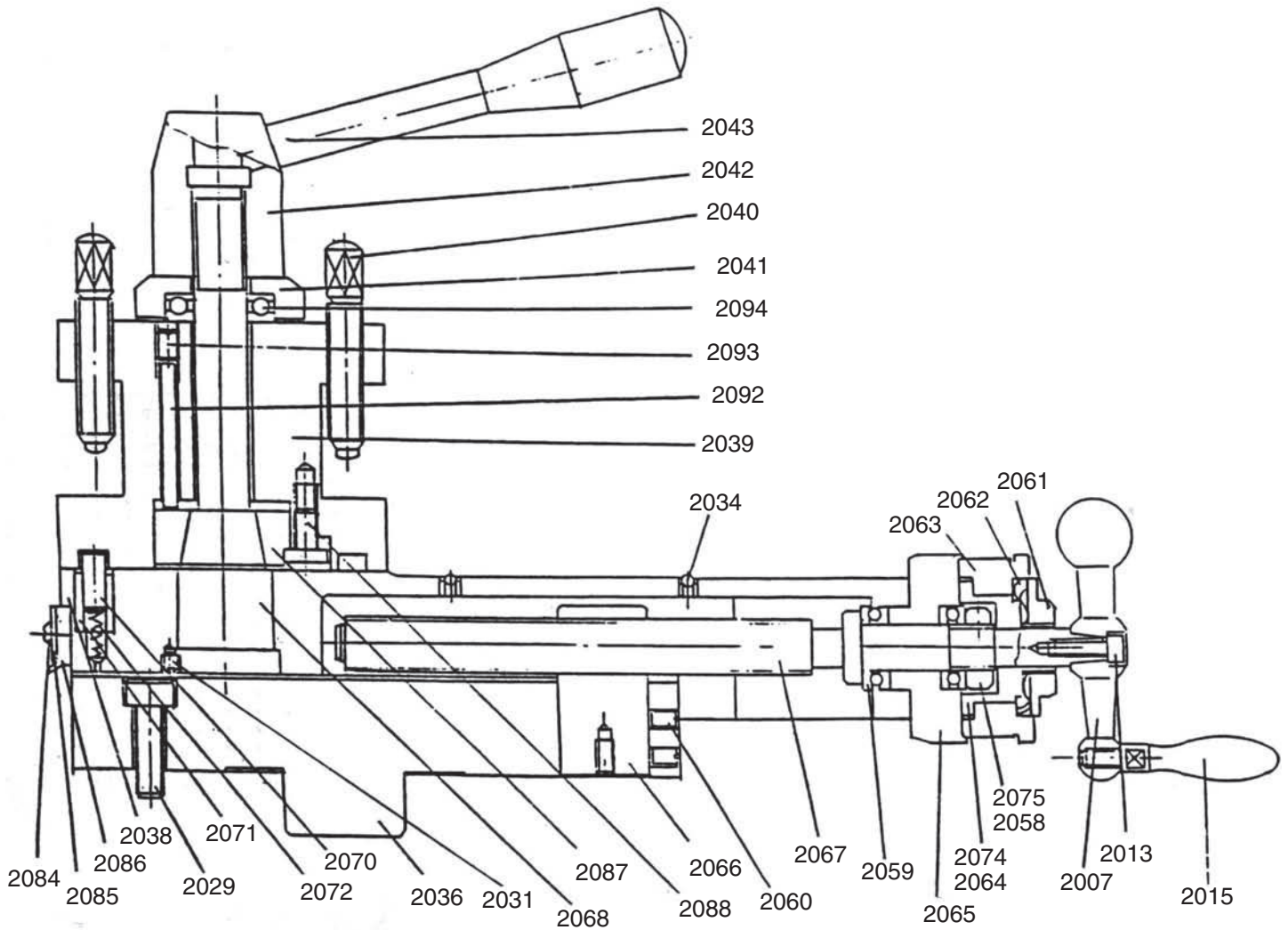
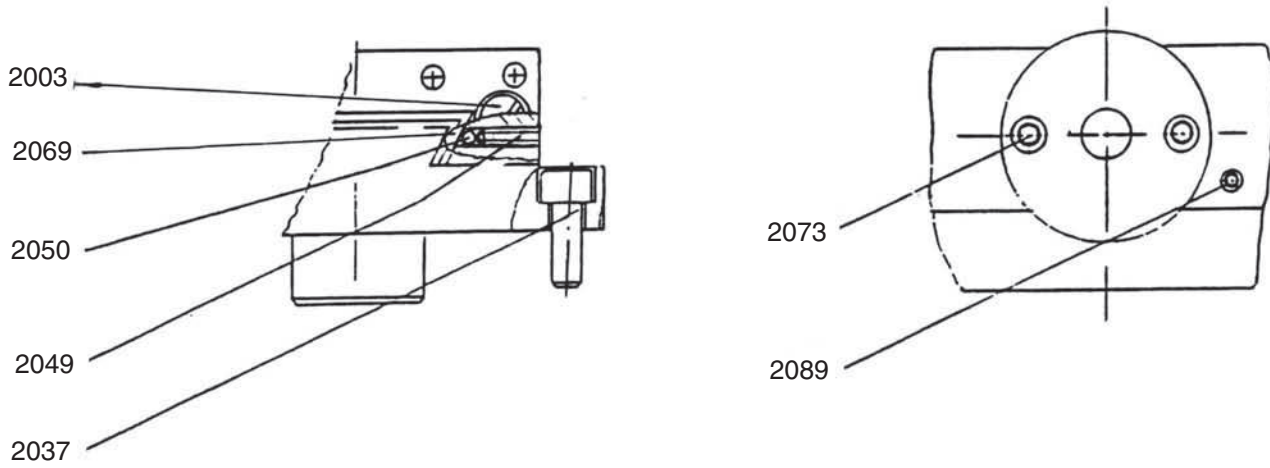
Carriage

(2000 Series Parts)



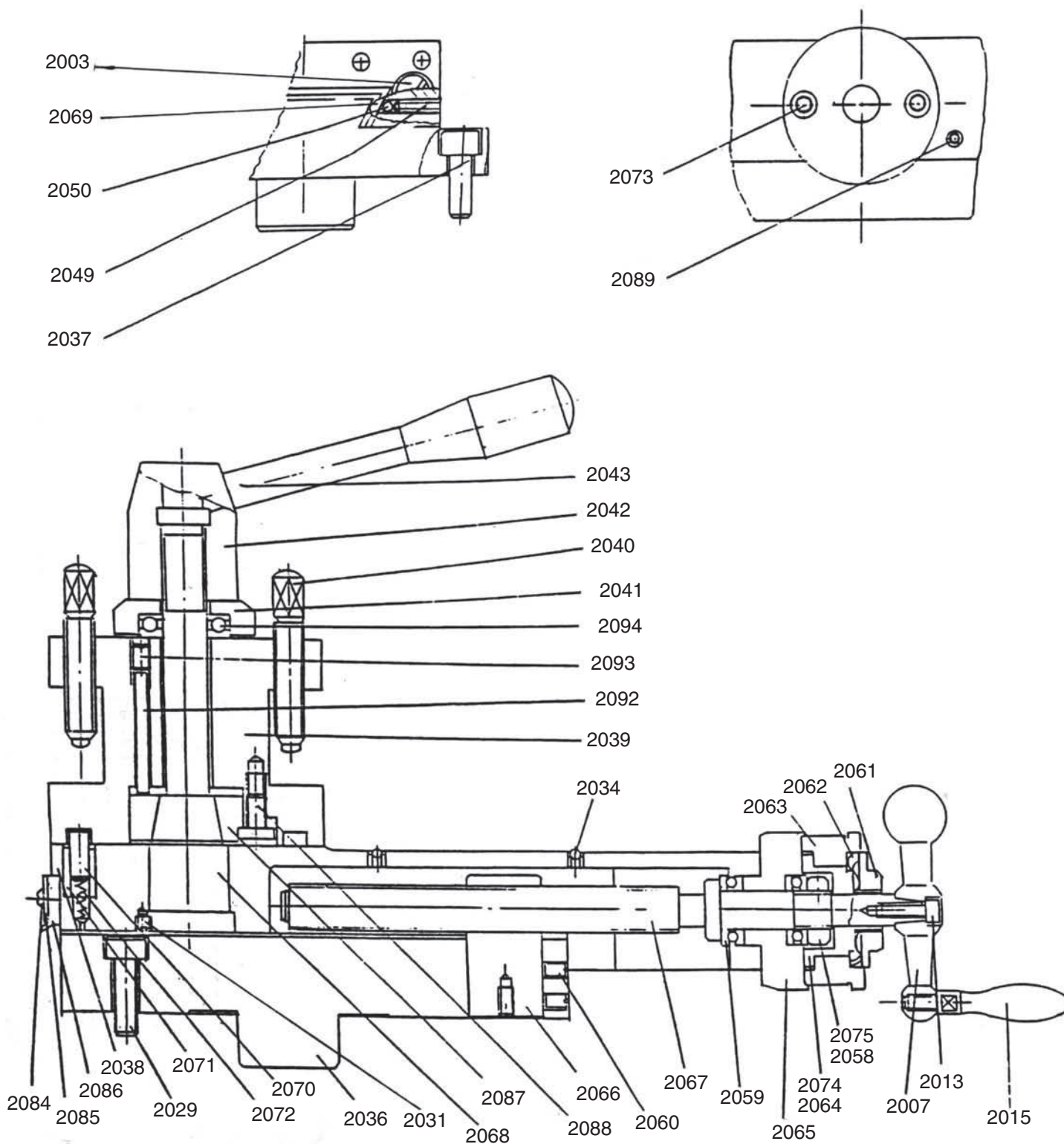
Cross Slide and Carriage

(2000 Series Parts)



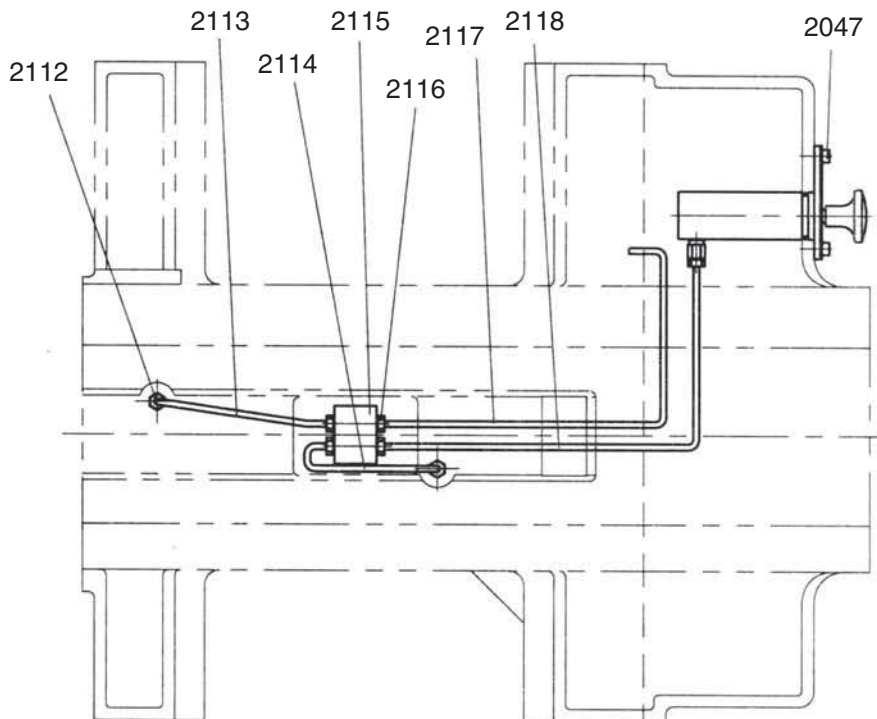
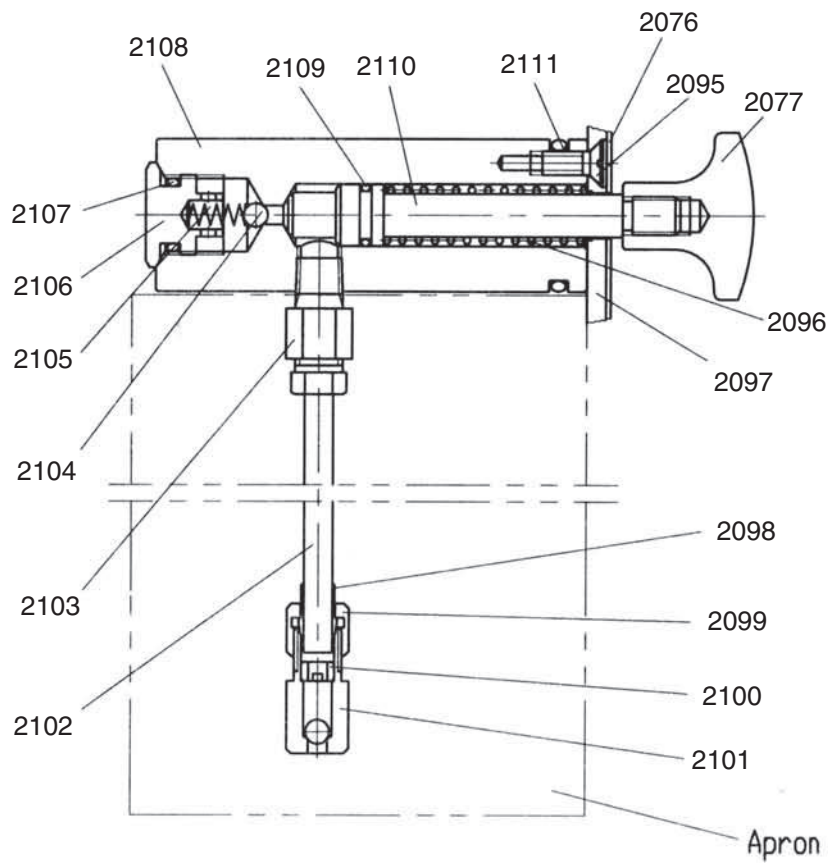
Compound Rest and Tool Post

(2000 Series Parts)



Carriage Oil Pump System

(2000 Series Parts)



| REF | PART # | DESCRIPTION |
|------|-----------|--------------------------------|
| 2000 | P06002000 | FLANGE NUT M20-2.5 |
| 2001 | P06002001 | SADDLE |
| 2002 | P06002002 | NUT (INCH) |
| 2003 | P06002003 | GIB SCREW |
| 2004 | PSB48M | CAP SCREW M6-1 X 35 |
| 2005 | P06002005 | GIB |
| 2006 | PSB68M | CAP SCREW M6-1 X 8 |
| 2007 | P06002007 | HANDLE |
| 2008 | P06002008 | BRACKET |
| 2009 | P06002009 | THRUST BEARING 8101 |
| 2010 | P06002010 | HEX NUT |
| 2011 | P06002011 | CROSS FEED SCREW (INCH) |
| 2012 | P06002012 | CROSS FEED PINION |
| 2013 | PSB04M | CAP SCREW M6-1 X 10 |
| 2014 | P06002014 | BRACKET |
| 2015 | P06002015 | HANDLE |
| 2016 | PSS03M | SET SCREW M6-1 X 8 |
| 2017 | P06002017 | CLUTCH-DIAL |
| 2018 | P06002018 | BALL OILER |
| 2019 | P06002019 | CROSS FEED DIAL |
| 2020 | P06002020 | WAVY WASHER |
| 2021 | P06002021 | BARREL NUT |
| 2022 | P06002022 | CRACK HANDLE |
| 2023 | PSB11M | CAP SCREW M8-1.25 X 16 |
| 2024 | P06002024 | HANDLE |
| 2025 | P06002025 | GIB (LEFT-FRONT) |
| 2026 | PSB13M | CAP SCREW M8-1.25 X 30 |
| 2027 | P06002027 | GIB CRADLE |
| 2028 | P06002028 | GIB |
| 2029 | PSB90M | CAP SCREW M10-1.5 X 55 |
| 2030 | P06002030 | CARRIAGE CLAMP |
| 2031 | P06002031 | KNURLED WASHER |
| 2032 | P06002032 | CROSS SLIDE COVER |
| 2033 | PSB13M | CAP SCREW M8-1.25 X 30 |
| 2034 | P06002034 | BALL OILER |
| 2035 | P06002035 | HEX NUT |
| 2037 | PSB47M | CAP SCREW M10-1.5 X 40 |
| 2038 | P06002038 | COMPOUND REST |
| 2039 | P06002039 | TOOL POST SPECIAL 500 SERIES |
| 2040 | P06002040 | SQUARE HEAD BOLT M12-1.75 X 50 |
| 2041 | P06002041 | BARREL SLEEVE |
| 2042 | P06002042 | HANDLE HUB |
| 2043 | P06002043 | LEVER M12-1.75 |
| 2044 | P06002044 | RUBBER WIPER |
| 2045 | P06002045 | RUBBER WIPER |
| 2046 | P06002046 | RUBBER WIPER |
| 2047 | PS08M | PHLP HD SCR M5-.8 X 12 |
| 2048 | PS02M | PHLP HD SCR M4-.7 X 12 |
| 2049 | PSB52M | CAP SCREW M8-1.25 X 10 |
| 2050 | P06002050 | STEEL BALL 1/4" |

| REF | PART # | DESCRIPTION |
|------|-----------|----------------------------|
| 2051 | P06002051 | GIB |
| 2052 | P06002052 | RUBBER WIPER |
| 2053 | P06002053 | CARRIAGE CLAMP |
| 2054 | P06002054 | GIB SCREW |
| 2055 | P06002055 | RUBBER WIPER |
| 2056 | P06002056 | WIPER |
| 2057 | P06002057 | SET SCREW M8-1.25 X 70 |
| 2058 | P06002058 | SPANNER NUT |
| 2059 | P06002059 | THRUST BEARING 8102 |
| 2060 | PSS01M | SET SCREW M6-1 X 10 |
| 2061 | P06002061 | BARREL NUT |
| 2062 | P06002062 | WAVY WASHER |
| 2063 | P06002063 | DIAL-COMPOUND REST (INCH) |
| 2064 | P06002064 | CLUTCH DIAL |
| 2065 | P06002065 | DIAL HOUSING |
| 2066 | P06002066 | HALF NUT (INCH) |
| 2067 | P06002067 | LEAD SCREW |
| 2068 | P06002068 | TOOL POST SHAFT |
| 2069 | P06002069 | GIB |
| 2070 | P06002070 | GUIDE PIN |
| 2071 | P06002071 | SLEEVE |
| 2072 | P06002072 | COMPRESSION SPRING |
| 2073 | PSB02M | CAP SCREW M6-1 X 20 |
| 2074 | PSS31M | SET SCREW M5-.8 X 8 |
| 2075 | PSB85M | CAP SCREW M6-1 X 6 |
| 2076 | P06002076 | END PLATE |
| 2077 | P06002077 | HANDLE |
| 2078 | PSB71M | CAP SCREW M10-1.5 X 60 |
| 2079 | P06002079 | TAPER PIN 8 X 60MM |
| 2080 | P06002080 | OIL PLUG |
| 2081 | PSB14M | CAP SCREW M8-1.25 X 20 |
| 2082 | PSB02M | CAP SCREW M6-1 X 20 |
| 2083 | P06002083 | GIB (FRONT) |
| 2084 | PS02M | PHLP HD SCR M4-.7 X 12 |
| 2085 | P06002085 | RUBBER WIPER |
| 2086 | P06002086 | RUBBER WIPER |
| 2087 | P06002087 | TOOL HOLDER SPECIAL SERIES |
| 2088 | PN09M | HEX NUT M12-1.75 |
| 2089 | PSB12M | CAP SCREW M8-1.25 X 40 |
| 2090 | P06002090 | RUBBER WIPER |
| 2091 | P06002091 | RUBBER WIPER |
| 2092 | P06002092 | STUD M12-1.75 X 60 |
| 2093 | P06002093 | PISTON FOOT |
| 2094 | P06002094 | CAP SCREW M16-2 X 12 |
| 2095 | PFH07M | FLAT HD SCR M5-.8 X 10 |
| 2096 | P06002096 | COMPRESSION SPRING |
| 2097 | P06002097 | BOTTOM PLATE |
| 2098 | P06002098 | TUBE FITTING |
| 2099 | P06002099 | TUBE NUT |



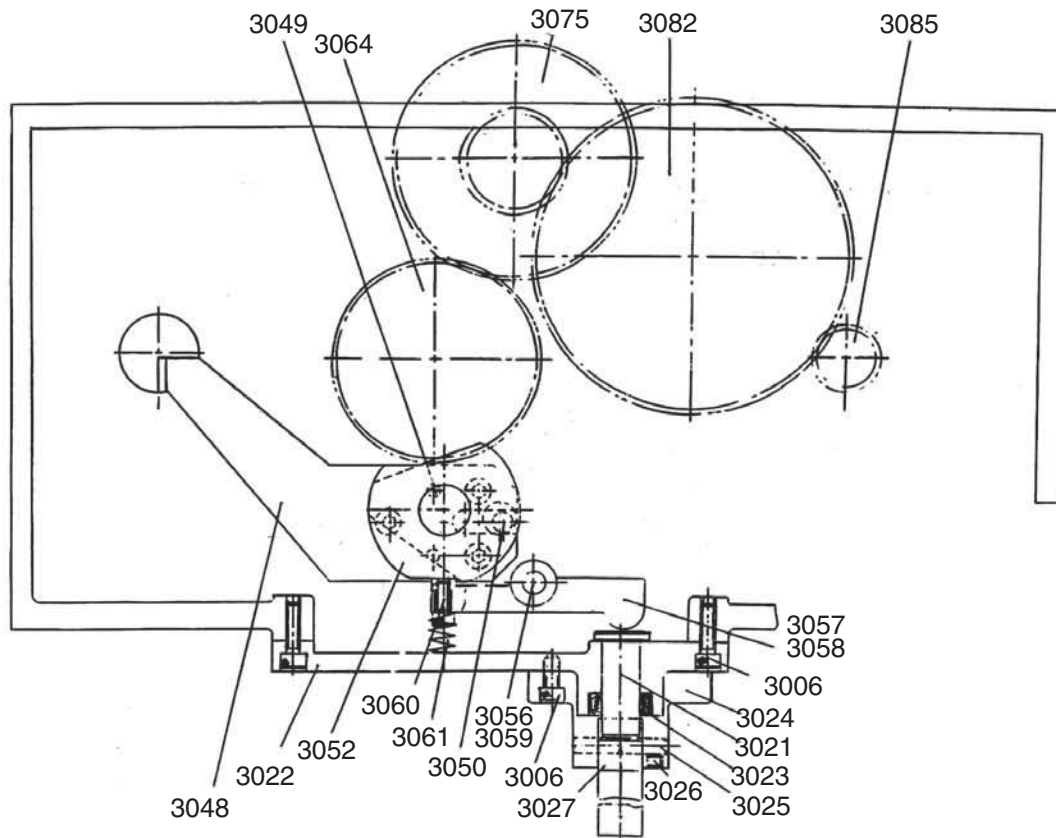
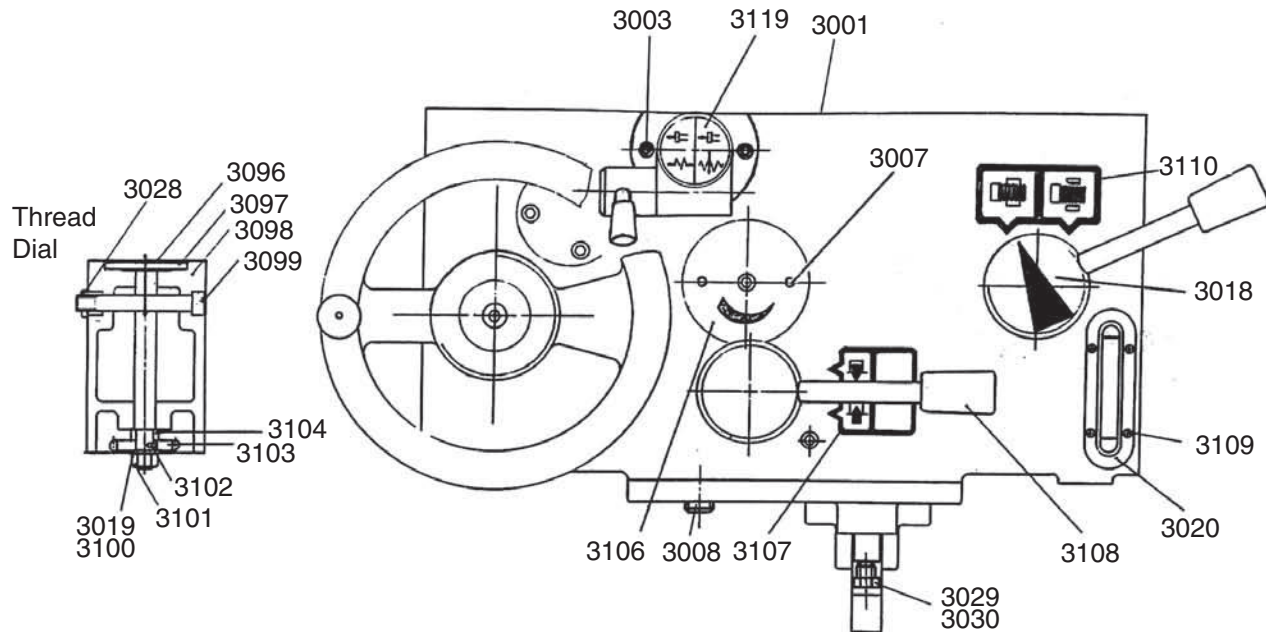
| REF | PART # | DESCRIPTION |
|------|-----------|----------------------|
| 2100 | P06002100 | SLEEVE |
| 2101 | P06002101 | CHECK VALVE |
| 2102 | P06002102 | BRASS TUBE 6 X 170MM |
| 2103 | P06002103 | TUBE FITTING |
| 2104 | P06002104 | STEEL BALL 5MM |
| 2105 | P06002105 | COMPRESSION SPRING |
| 2106 | P06002106 | END PLUG |
| 2107 | P06001084 | O-RING 16 X 2.4MM |
| 2108 | P06002108 | PUMP BODY |
| 2109 | P06002109 | O-RING 9 X 1.8MM |
| 2110 | P06002110 | PISTON ROD |
| 2111 | P06002111 | O-RING 32 X 3.1MM |

| REF | PART # | DESCRIPTION |
|------|-----------|-------------------------|
| 2112 | P06002112 | TUBE FITTING |
| 2113 | P06002113 | BRASS TUBE 4 X 200MM |
| 2114 | P06002114 | BRASS TUBE 4 X 170MM |
| 2115 | P06002115 | MANIFOLD |
| 2116 | P06002116 | SLEEVE AND FITTING |
| 2117 | P06002117 | BRASS TUBE 4 X 390MM |
| 2118 | P06002118 | BRASS TUBE 4 X 410MM |
| 2119 | PR58M | EXT RETAINING RING 24MM |
| 2120 | P06002120 | GEAR 19T X M2 |
| 2121 | PK70M | KEY 8 X 8 X 12MM |
| 2122 | P06002122 | FEMALE KNOB M12-1.75 |
| 2123 | P06002123 | FEMALE KNOB M12-1.75 |



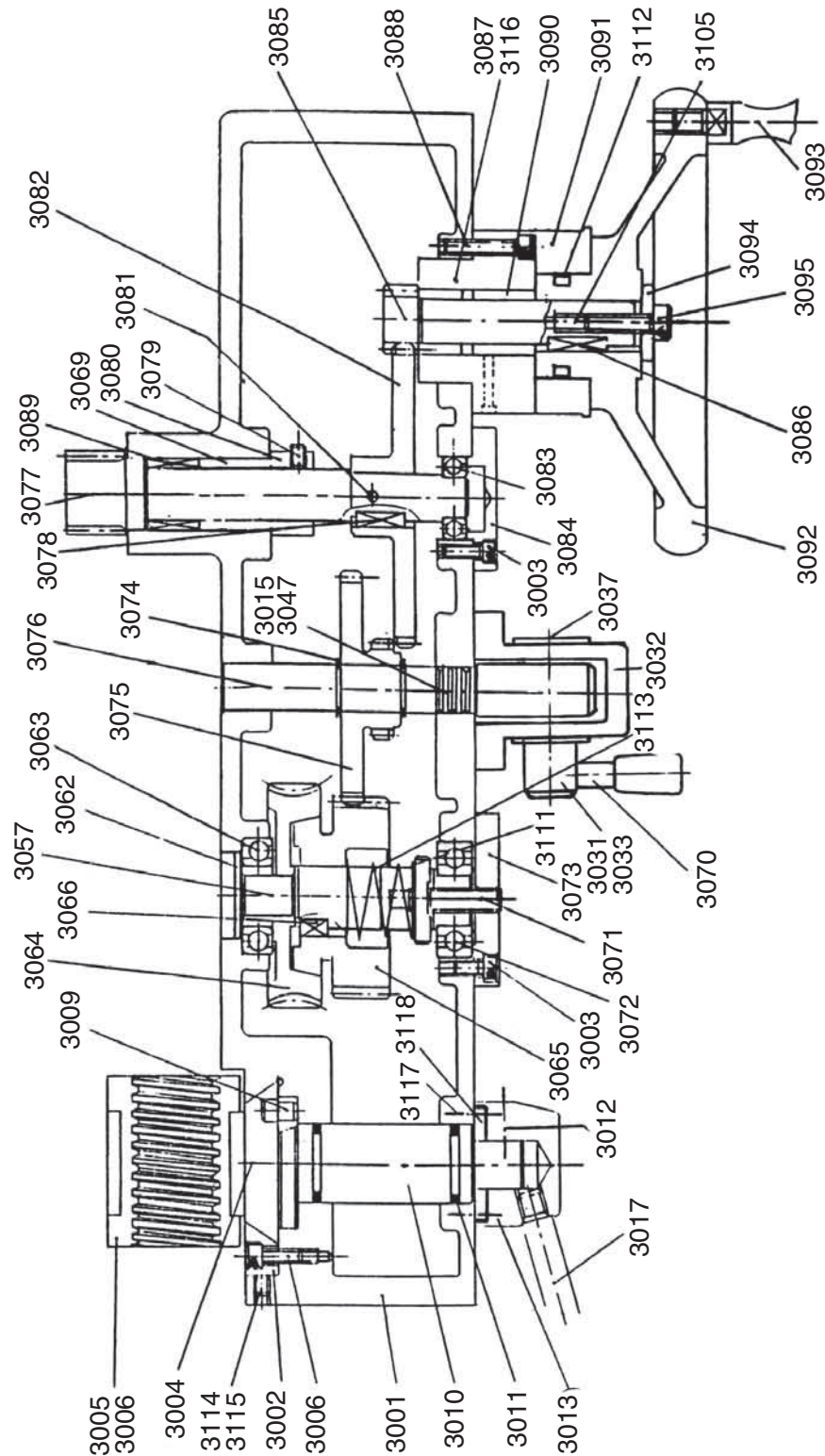
Apron Face, Thread Dial, Auto Stop System

(3000 Series Parts)



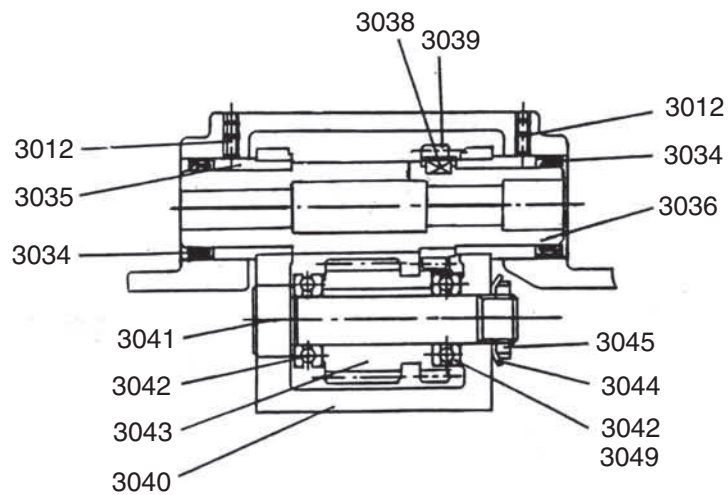
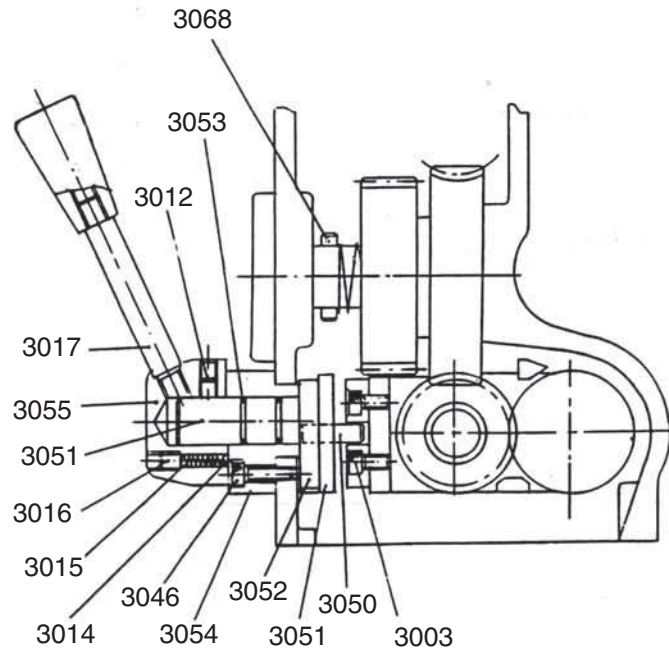
Apron Gearing, Halfnut, Feed System

(3000 Series Parts)



Apron Feed Rod, Clutch and Lever System

(3000 Series Parts)



| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 3001 | P06003001 | APRON CASE |
| 3002 | P06003002 | GIB |
| 3003 | PSB26M | CAP SCREW M6-1 X 12 |
| 3004 | P06003004 | LEAD NUT ASSY (INCH) |
| 3005 | P06003005 | HAFT NUT (INCH) |
| 3006 | PSB01M | CAP SCREW M6-1 X 16 |
| 3007 | P06000141 | RIVET 2 X 5MM |
| 3008 | P06003008 | OIL PLUG |
| 3009 | P06003009 | KEY |
| 3010 | P06003010 | SHAFT |
| 3011 | P06002111 | O-RING 32 X 3.5MM |
| 3012 | PSS16M | SET SCREW M8-1.25 X 10 |
| 3013 | P06003013 | SHAFT SLEEVE |
| 3014 | P06003014 | STEEL BALL 1/4" |
| 3015 | P06003015 | COMPRESSION SPRING |
| 3016 | PSB52M | CAP SCREW M8-1.25 X 10 |
| 3017 | P06003017 | LEVER |
| 3018 | P06003018 | POINTER PLATE |
| 3019 | PRP35M | ROLL PIN 5 X 10MM |
| 3020 | P06003020 | OIL SIGHT |
| 3021 | P06003021 | GUIDE PIN |
| 3022 | P06003022 | BOTTOM COVER |
| 3023 | P06003023 | OIL SEAL |
| 3024 | P06003024 | BRACKET |
| 3025 | P06003025 | DOWEL PIN 8 X 40MM |
| 3026 | PSB85M | CAP SCREW M6-1 X 6 |
| 3027 | P06003027 | LEVER |
| 3028 | P06003028 | SPACER |
| 3029 | PSS19M | SET SCREW M8-1.25 X 30 |
| 3030 | PN03M | HEX NUT M8-1.25 |
| 3031 | P06003031 | LEVER HUB |
| 3032 | P06003032 | CHANGE SLEEVE |
| 3033 | PS09M | PHLP HD SCR M5-.8 X 10 |
| 3034 | P06003034 | OIL SEAL |
| 3035 | P06003035 | BUSHING |
| 3036 | P06003036 | FEED ROD SLEEVE |
| 3037 | P06003037 | PLUG |
| 3038 | PK81M | KEY 6 X 6 X 12MM |
| 3039 | P06003039 | GEAR 24T X M2 |
| 3040 | P06003040 | WORM SEAT |
| 3041 | P06003041 | SHAFT |
| 3042 | P06001060 | THRUST BEARING 8104 |
| 3043 | P06003043 | WORM GEAR |
| 3044 | P06003044 | TAB WASHER 20MM |
| 3045 | P06003045 | SPANNER NUT M20-1.5 |
| 3046 | PSB02M | CAP SCREW M6-1 X 20 |
| 3047 | P06003047 | STEEL BALL 7/32" |
| 3048 | P06003048 | BLOCK |
| 3049 | P06003049 | FLAT WASHER |
| 3050 | P06003050 | DOWEL PIN 8 X 25MM |

| REF | PART # | DESCRIPTION |
|------|-----------|-------------------------|
| 3051 | P06003051 | SHAFT |
| 3052 | P06003052 | BUFFER |
| 3053 | P06000169 | O-RING 20 X 2.4MM |
| 3054 | P06003054 | SLEEVE |
| 3055 | P06003055 | LEVER HUB |
| 3056 | PR01M | EXT RETAINING RING 10MM |
| 3057 | P06003057 | LEVER SHAFT |
| 3058 | PSB58M | CAP SCREW M8-1.25 X 12 |
| 3059 | P06003059 | SPECIAL SCREW |
| 3060 | PS05M | PHLP HD SCR M5-.8 X 8 |
| 3061 | P06003061 | COMPRESSION SPRING |
| 3062 | P06003062 | COVER |
| 3063 | P06001067 | BALL BEARING 180105 |
| 3064 | P06003064 | WORM GEAR |
| 3065 | P06003065 | GEAR 36T X M2 |
| 3066 | PK70M | KEY 8 X 8 X 12MM |
| 3067 | P06003067 | SHAFT |
| 3068 | P06003068 | GUIDE PIN |
| 3069 | P06003069 | SLEEVE |
| 3070 | P06003070 | HANDLE LEVER |
| 3071 | PSS73M | SET SCREW M10-1.5 X 30 |
| 3072 | P6204 | BALL BEARING 6204 |
| 3073 | P06003073 | COVER |
| 3074 | PR09M | EXT RETAINING RING 20MM |
| 3075 | P06003075 | GEAR 46T X M2/18T X M2 |
| 3076 | P06003076 | SHAFT |
| 3077 | P06003077 | PINION |
| 3078 | PK07M | KEY 6 X 6 X 20MM |
| 3079 | PSB58M | CAP SCREW M8-1.25 X 12 |
| 3080 | P06003080 | SPACER |
| 3081 | P06003081 | CAP SCREW M8-1.25 X 8 |
| 3082 | P06003082 | GEAR 61T X M2 |
| 3083 | P06003083 | BALL BEARING 103 |
| 3084 | P06003084 | COVER |
| 3085 | P06003085 | SHAFT |
| 3086 | PK45M | KEY 6 X 6 X 24MM |
| 3087 | P06003087 | SEAT |
| 3088 | PSB06M | CAP SCREW M6-1 X 25 |
| 3089 | P06003089 | NEEDLE BEARING 4644903 |
| 3090 | P06003090 | BEARING 2010 |
| 3091 | P06003091 | DIAL-RACK |
| 3092 | P06003092 | HAND WHEEL |
| 3093 | P06003093 | HANDLE |
| 3094 | P06003094 | FLAT WASHER |
| 3095 | P06003095 | SPECIAL SCREW |
| 3096 | P06003096 | DIAL FACE |
| 3097 | P06003097 | DIAL INDICATOR SHAFT |
| 3098 | P06003098 | THREAD DIAL BODY |
| 3099 | P06003099 | CAP SCREW M8-1.25 X 85 |



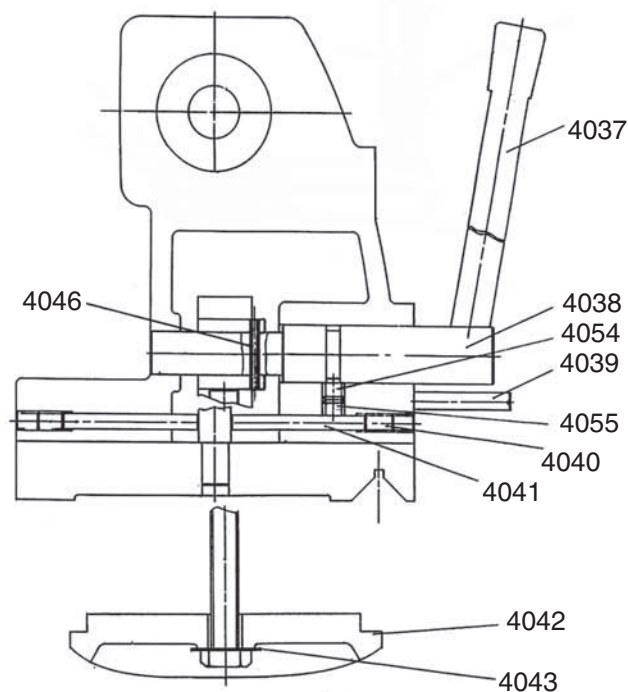
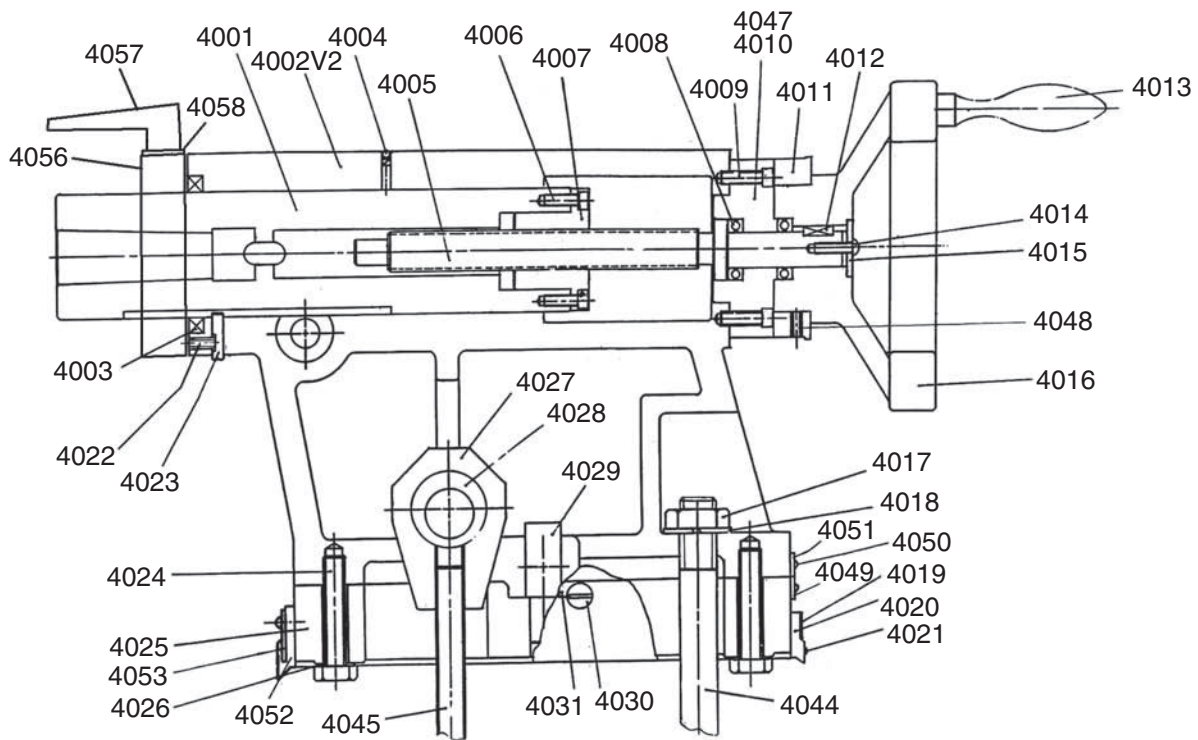
| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 3100 | PLW06M | LOCK WASHER 10MM |
| 3101 | PN02M | HEX NUT M10-1.5 |
| 3102 | P06003102 | DOWEL PIN 3 X 8MM |
| 3103 | P06003103 | GEAR 16T X M2 |
| 3104 | P06003104 | SPACER |
| 3105 | PSB38M | CAP SCREW M5-.8 X 25 |
| 3106 | P06003106 | INDICATOR PLATE |
| 3107 | P06003107 | INDICATOR PLATE |
| 3108 | P06003108 | FEMALE KNOB M10-1.5 |
| 3109 | PS38M | PHLP HD SCR M4-.7 X 10 |

| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 3110 | P06003110 | INDICATOR PLATE |
| 3111 | P06003111 | SPACER |
| 3112 | P06003112 | FLAT SPRING |
| 3113 | P06003113 | COMPRESSION SPRING |
| 3114 | PN01M | HEX NUT M6-1 |
| 3115 | PSS25M | SET SCREW M6-1 X 20 |
| 3116 | P06003116 | BALL OILER |
| 3117 | PS52M | PHLP HD SCR M4-.7 X 20 |
| 3118 | P06003118 | SHOULDER WASHER |
| 3119 | P06003119 | INDICATOR PLATE |



Tailstock

(4000 Series Parts)



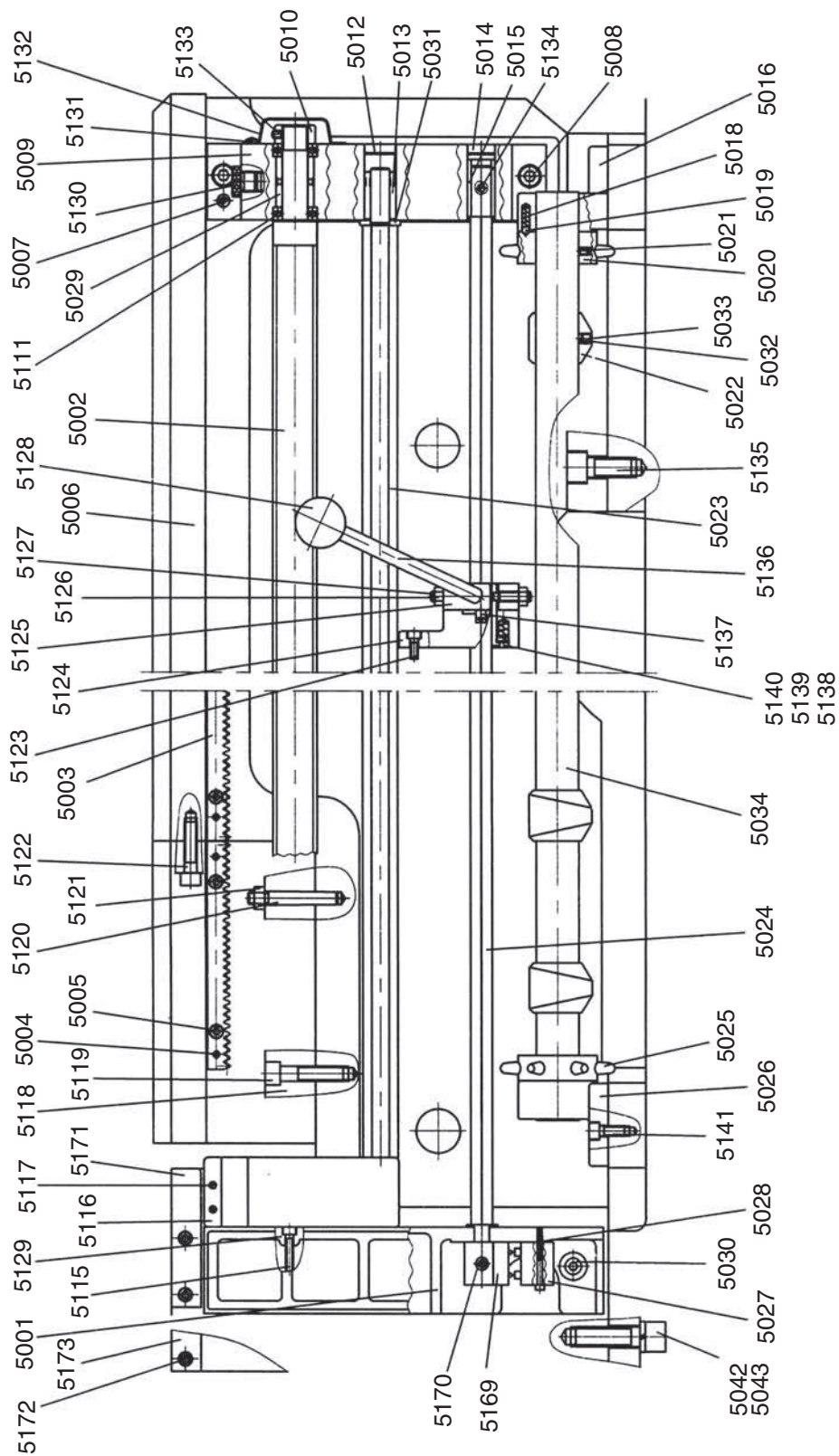
| REF | PART # | DESCRIPTION |
|--------|-------------|-------------------------|
| 4001 | P06004001 | QUILL |
| 4002V2 | P06004002V2 | TAILSTOCK BODY V2.07.11 |
| 4003 | P06004003 | OIL SEAL |
| 4004 | P06004004 | BALL OILER |
| 4005 | P06004005 | FEED SCREW (INCH) |
| 4006 | PSB01M | CAP SCREW M6-1 X 16 |
| 4007 | P06004007 | FEED NUT (INCH) |
| 4008 | P06004008 | THRUST BEARING 8105 |
| 4009 | PSB01M | CAP SCREW M6-1 X 16 |
| 4010 | P06004010 | END CAP |
| 4011 | P06004011 | DIAL-FEED (INCH) |
| 4012 | PK07M | KEY 6 X 6 X 20MM |
| 4013 | P06004013 | HANDLE |
| 4014 | PS22M | PHLP HD SCR M5-.8 X 25 |
| 4015 | P06004015 | FLAT WASHER |
| 4016 | P06004016 | HANDLE WHEEL |
| 4017 | PN28M | HEX NUT M20-2.5 |
| 4018 | PLW07M | LOCK WASHER 20MM |
| 4019 | P06004019 | WIPER RETAINER |
| 4020 | P06004020 | RUBBER WIPER |
| 4021 | PS02M | PHLP HD SCR M4-.7 X 12 |
| 4022 | PSB04M | CAP SCREW M6-1 X 10 |
| 4023 | P06004023 | PIN SHAFT |
| 4024 | PB140M | HEX BOLT M12-1.75 X 70 |
| 4025 | P06004025 | TAILSTOCK BASE |
| 4026 | PLW05M | LOCK WASHER 12MM |
| 4027 | P06004027 | BOLT-CLAMP |

| REF | PART # | DESCRIPTION |
|------|-----------|---------------------------|
| 4028 | P06004028 | SLEEVE |
| 4029 | P06004029 | ADJUSTMENT BLOCK |
| 4030 | P06004030 | SPECIAL SCREW |
| 4031 | P06004031 | GIB |
| 4037 | P06004037 | LEVER |
| 4038 | P06004038 | SHAFT |
| 4039 | P06004039 | SPECIAL SCREW |
| 4040 | PSS65M | SET SCREW M16-2 X 20 |
| 4041 | P06004041 | SHAFT |
| 4042 | P06004042 | CLAMP SHOE |
| 4043 | PLW07M | LOCK WASHER 20MM |
| 4044 | P06004044 | HEX BOLT M20-2.5 X 150 |
| 4045 | P06004045 | HEX BOLT M20-2.5 X 100 |
| 4046 | PRP31M | ROLL PIN 6 X 36MM |
| 4047 | P06004047 | BALL OILER |
| 4048 | PSS24M | SET SCREW M5-.8 X 25 |
| 4049 | P06004049 | SCALE PLATE |
| 4050 | P06000141 | RIVET 2 X 5MM |
| 4051 | P06004051 | SCALE PLATE |
| 4052 | P06004052 | RUBBER WIPER |
| 4053 | P06004053 | WIPER PLATE |
| 4054 | PSB62M | CAP SCREW M10-1.5 X 12 |
| 4055 | PSS30M | SET SCREW M10-1.5 X 10 |
| 4056 | P06004056 | QUILL LOCK CLAMP ASSEMBLY |
| 4057 | P06004057 | LOCK LEVER ASSEMBLY |
| 4058 | P06004058 | LOCK LEVER FLAT WASHER |



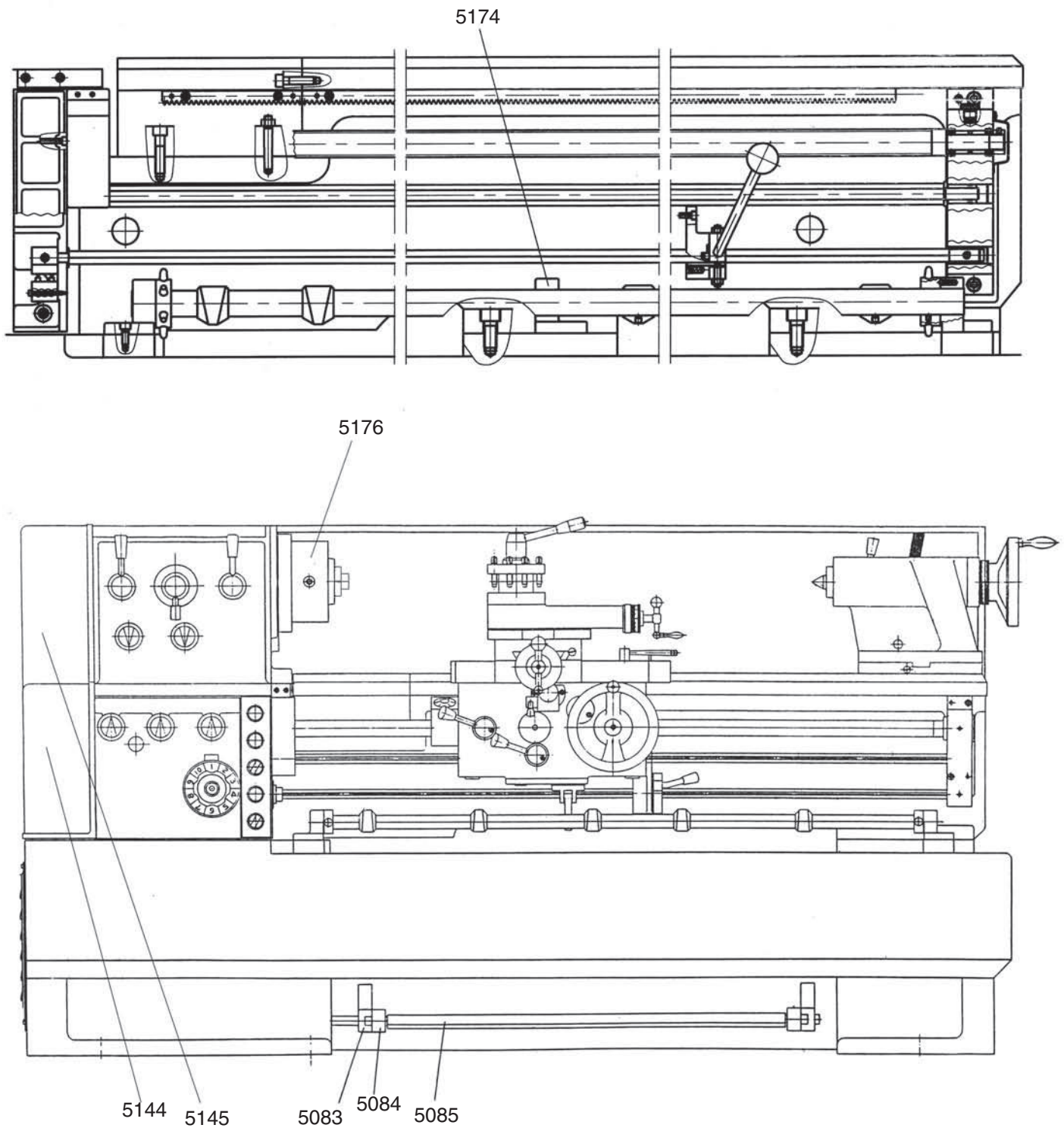
Bed Assembly

(5000 Series Parts)



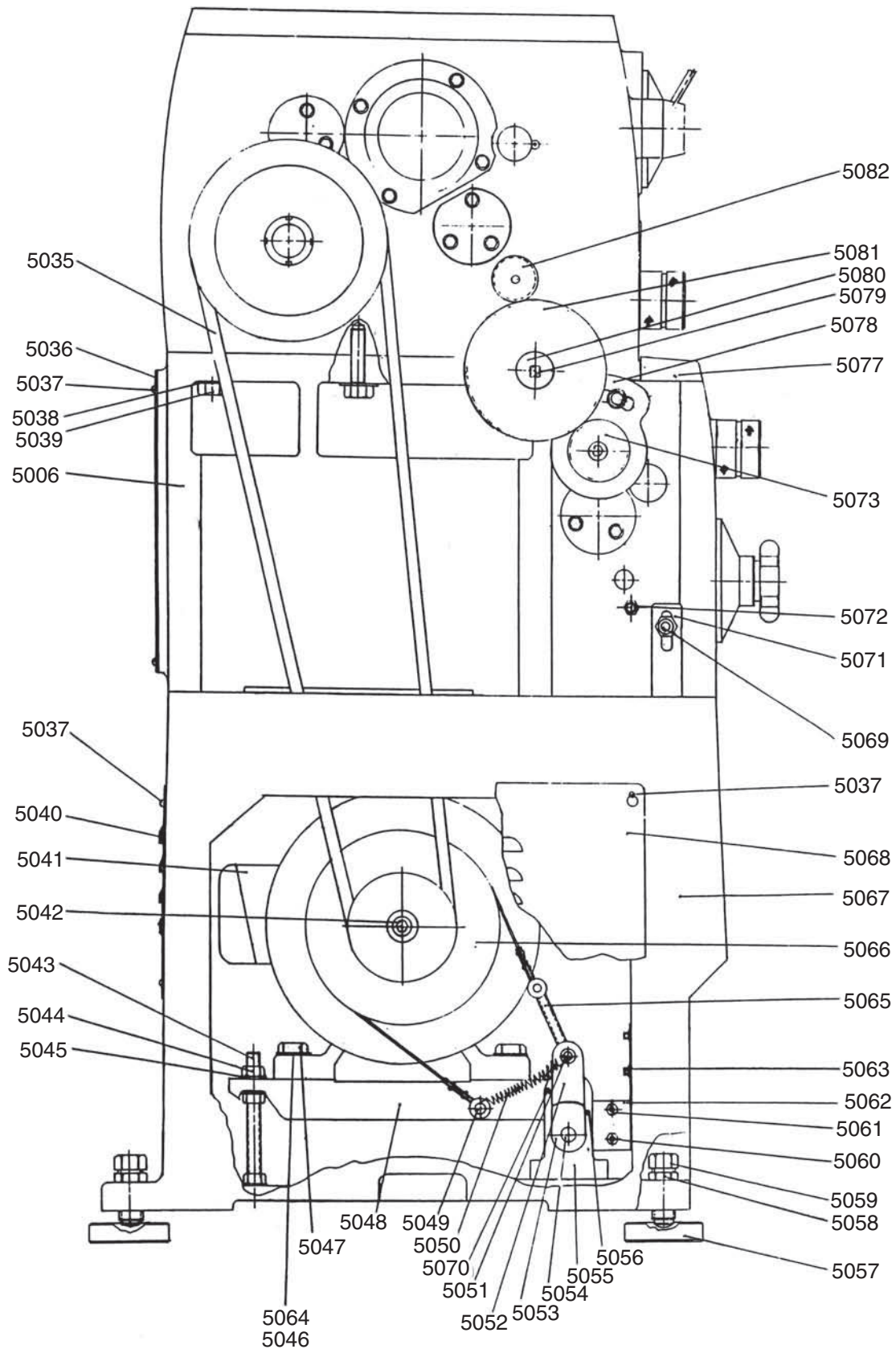
Brake Pedal and Headstock Panels

(5000 Series Parts)



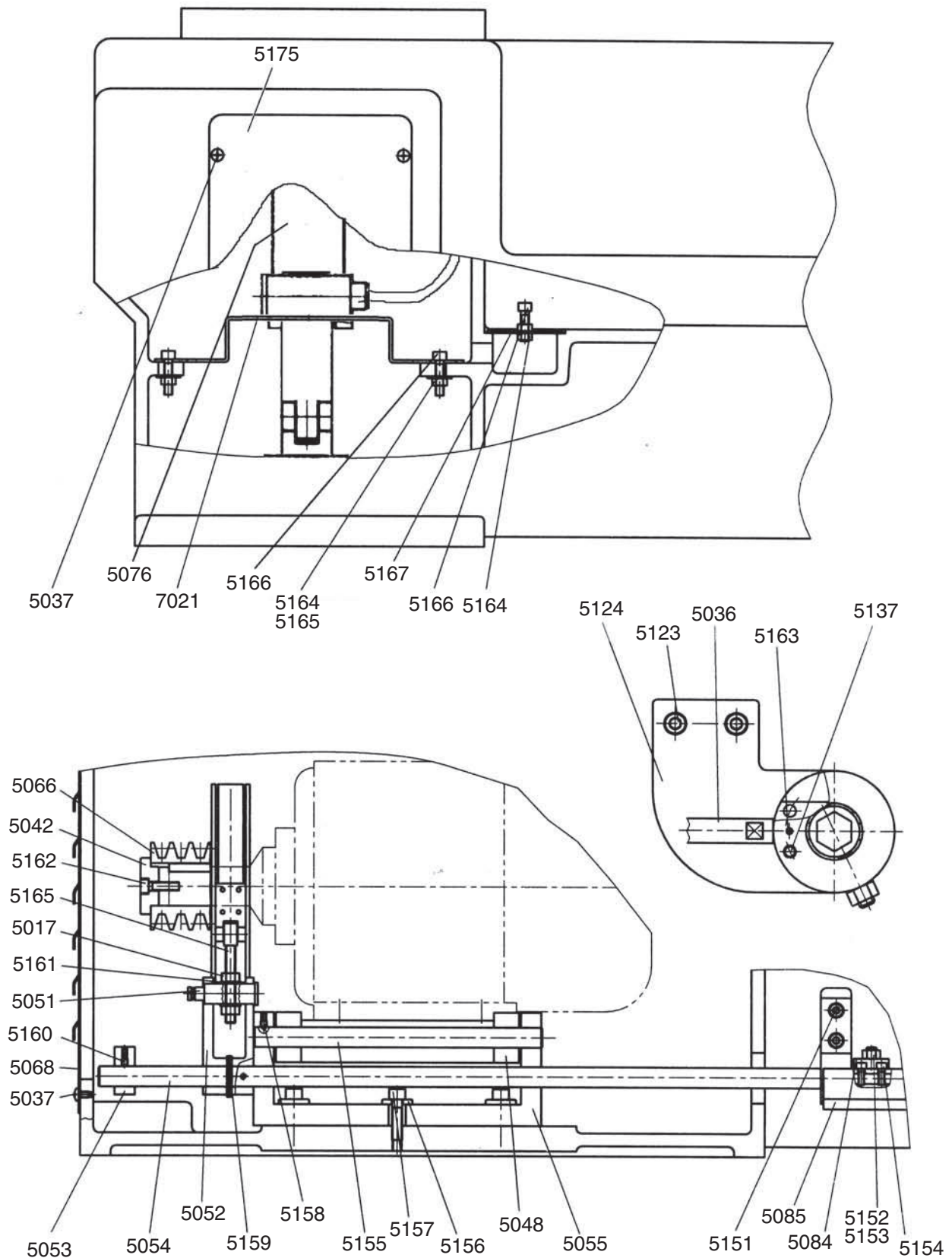
Brake System and Change Gears

(5000 Series Parts)



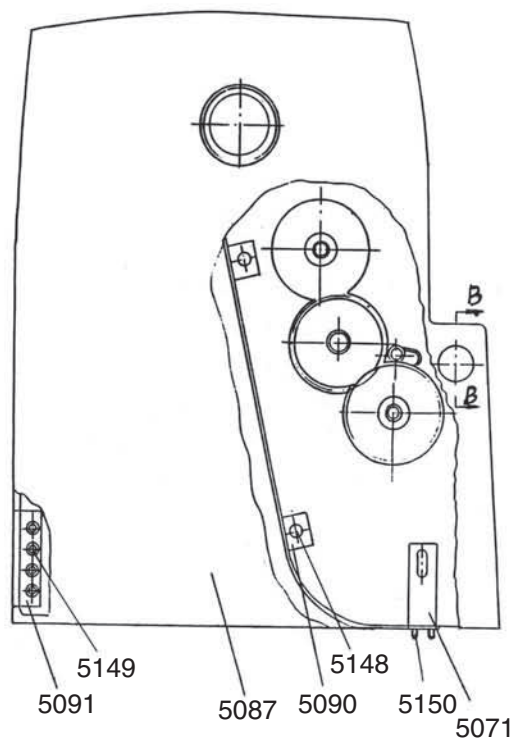
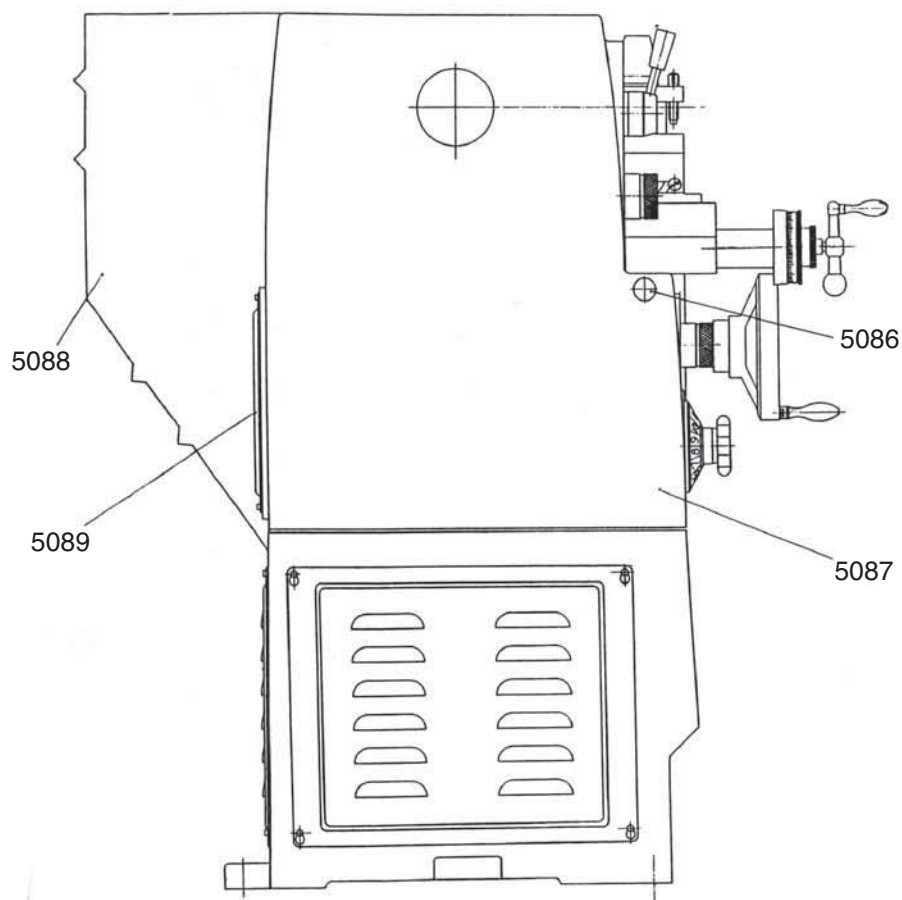
Motor and Headstock Mounting

(5000 Series Parts)



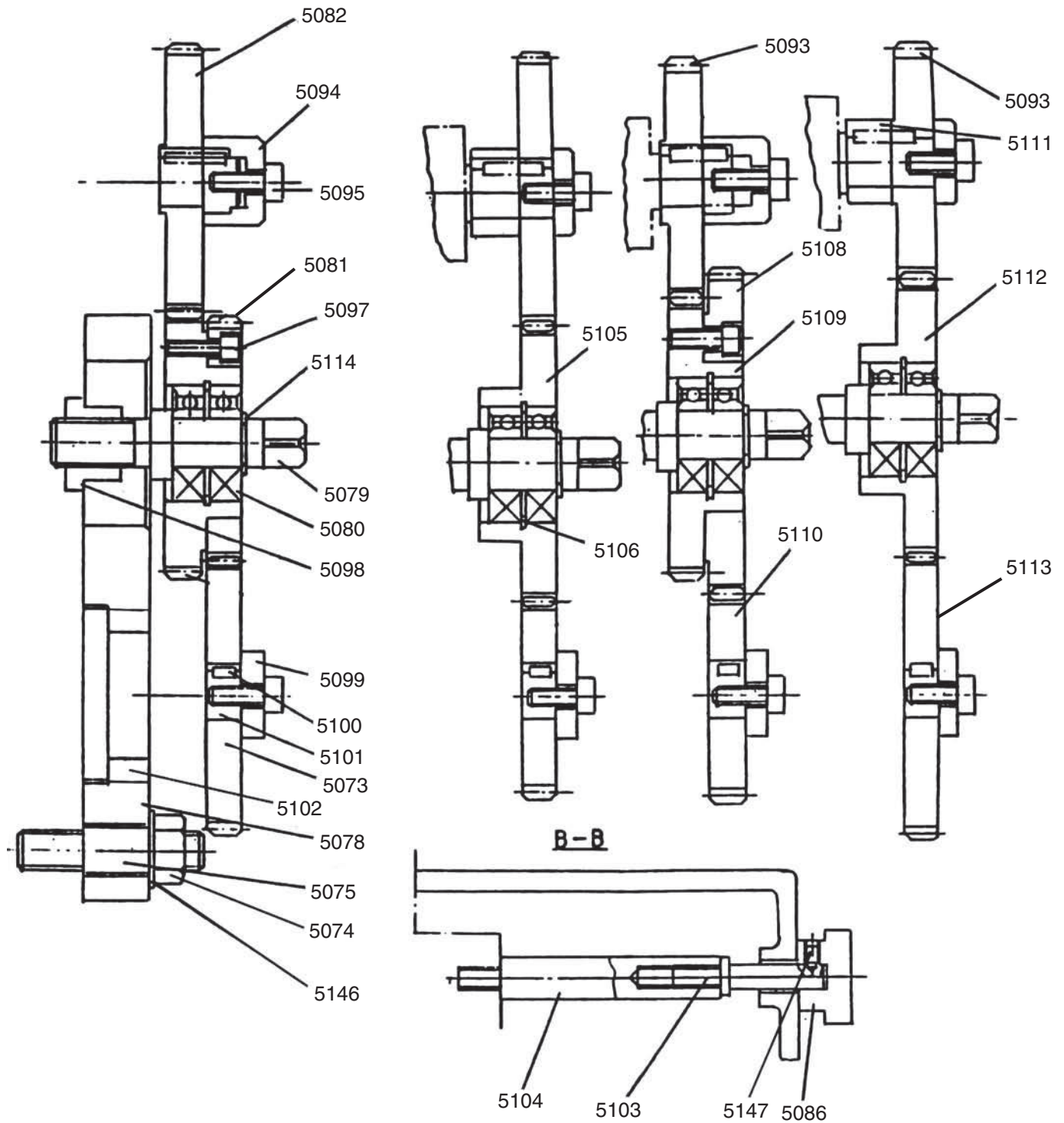
End Covers and Splash Guard

(5000 Series Parts)



Change Gear System

(5000 Series Parts)



| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 5001 | P06005001 | SWITCH SEAT |
| 5002 | P06005002 | LEAD SCREW (INCH) |
| 5003 | P06005003 | RACK |
| 5004 | PRP05M | ROLL PIN 5 X 30MM |
| 5005 | PSB06M | CAP SCREW M6-1 X 25 |
| 5006 | P06005006 | BED |
| 5007 | P06005007 | TAPER PIN 10 X 45MM |
| 5008 | PSB47M | CAP SCREW M10-1.5 X 40 |
| 5009 | P06005009 | HOUSING |
| 5010 | P06005010 | BARREL NUT |
| 5011 | P06004008 | THRUST BEARING 8105 |
| 5012 | P06005012 | PLUG |
| 5013 | P06005013 | BUSHING |
| 5014 | P06005014 | PLUG |
| 5015 | P06005015 | BUSHING |
| 5016 | P06005016 | BRACKET |
| 5017 | PN02M | HEX NUT M10-1.5 |
| 5018 | P06005018 | COMPRESSION SPRING |
| 5019 | P06005019 | STEEL BALL 6MM |
| 5020 | P06005020 | STAR DIAL |
| 5021 | PSB68M | CAP SCREW M6-1 X 8 |
| 5022 | P06005022 | CAM |
| 5023 | P06005023 | FEED ROD |
| 5024 | P06005024 | START ROD |
| 5025 | P06005025 | STAR DIAL |
| 5026 | P06005026 | BRACKET |
| 5027 | P06005027 | LIMIT SWITCH |
| 5028 | PS65M | PHLP HD SCR M4-.7 X 40 |
| 5029 | P06005029 | LIGHT SEAT |
| 5030 | PSB31M | CAP SCREW M8-1.25 X 25 |
| 5031 | P06005031 | SPACER |
| 5032 | P06005032 | CLAMP SHOE |
| 5033 | P06005033 | CAP SCREW M8-1.25 X 6 |
| 5034 | P06005034 | AUTO STOP ROD |
| 5035 | P06005035 | V-BELT B76 |
| 5036 | P06005036 | CONDUIT |
| 5037 | PS03M | PHLP HD SCR M6-1 X 8 |
| 5038 | PLW10M | LOCK WASHER 16MM |
| 5039 | PB80M | HEX BOLT M16-2 X 55 |
| 5040 | P06005040 | MOTOR COVER |
| 5041 | P06005041 | MOTOR |
| 5042 | P06005042 | SHOULDER WASHER |
| 5043 | P06005043 | CAP SCREW |
| 5044 | PN13M | HEX NUT M16-2 |
| 5045 | PW08M | FLAT WASHER 16MM |
| 5046 | PLW06M | LOCK WASHER 10MM |
| 5047 | PB14M | HEX BOLT M10-1.5 X 35 |
| 5048 | P06005048 | MOTOR SEAT |

| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 5049 | P06005049 | SHAFT |
| 5050 | P06005050 | TENSION SPRING |
| 5051 | P06005051 | SHAFT |
| 5052 | P06005052 | BRAKE LEVER |
| 5053 | P06005053 | CAM |
| 5054 | P06005054 | SHAFT |
| 5055 | P06005055 | MOTOR SEAT BRACKET |
| 5056 | P06005056 | LIMIT SWITCH |
| 5057 | P06005057 | LEVELING BLOCK |
| 5058 | P06005058 | SPECIAL NUT M24-2 |
| 5059 | P06005059 | FOOT STUD |
| 5060 | PS52M | PHLP HD SCR M4-.7 X 20 |
| 5061 | PN04M | HEX NUT M4-.7 |
| 5062 | P06005062 | LIMIT SWITCH SEAT |
| 5063 | PS09M | PHLP HD SCR M5-.8 X 10 |
| 5064 | PW04M | FLAT WASHER 10MM |
| 5065 | P06005065 | BRAKE BAND ASSY |
| 5066 | P06005066 | PULLEY |
| 5067 | P06005067 | STAND |
| 5068 | P06005068 | MOTOR COVER |
| 5069 | P06005069 | LIMIT SWITCH |
| 5070 | PS05M | PHLP HD SCR M5-.8 X 8 |
| 5071 | P06005071 | LIMIT SWITCH SEAT |
| 5072 | P06005072 | DOOR LOCK STUD |
| 5073 | P06005073 | GEAR 56T X 2.25 |
| 5074 | PN13M | HEX NUT M16-2 |
| 5075 | P06005075 | STUD |
| 5077 | P06005077 | TOP COVER |
| 5078 | P06005078 | SWING BRACKET |
| 5079 | P06005079 | SPINDLE STUD |
| 5080 | P06005080 | BALL BEARING 16204 |
| 5081 | P06005081 | GEAR 49T X 2.25 |
| 5082 | P06005082 | GEAR 55T X 2.25 |
| 5083 | P06005083 | BRACKET |
| 5084 | P06005084 | ARM |
| 5085 | P06005085 | BRAKE PEDAL |
| 5086 | P06005086 | THUMB KNOB |
| 5087 | P06005087 | SAFETY DOOR |
| 5088 | P06005088 | GUARD ASSEMBLY |
| 5089 | P06005089 | COVER |
| 5090 | P06005090 | OIL GUARD |
| 5091 | P06005091 | HINGE |
| 5093 | P06005093 | GEAR 48T X 2.25 |
| 5094 | P06005094 | SPACER |
| 5095 | PSB14M | CAP SCREW M8-1.25 X 20 |
| 5097 | PSB04M | CAP SCREW M6-1 X 10 |
| 5098 | P06005098 | SPACER |
| 5099 | P06005099 | SPACER |



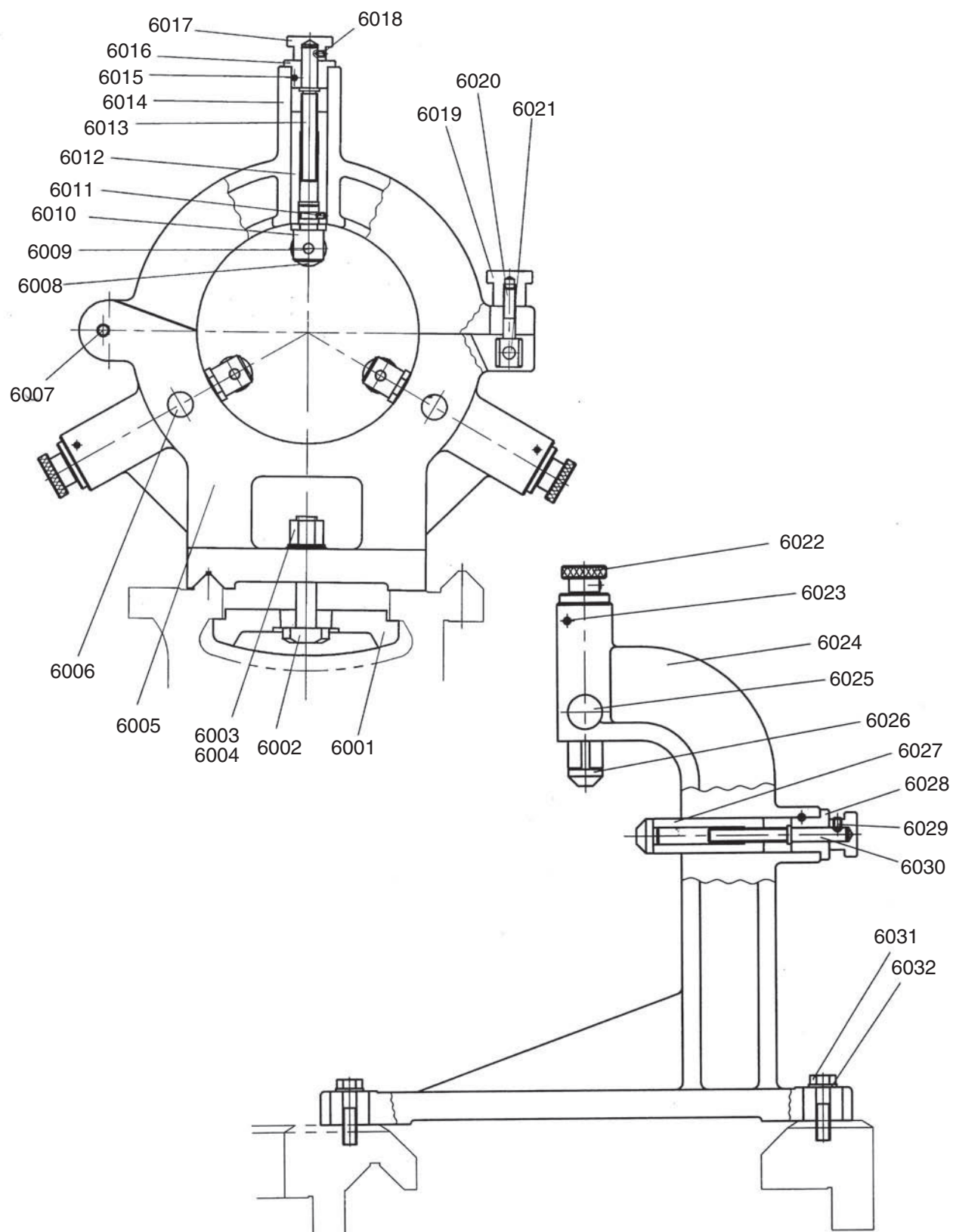
| REF | PART # | DESCRIPTION |
|------|-----------|-------------------------|
| 5100 | PK95M | KEY 6 X 6 X 10MM |
| 5101 | P06005101 | SHAFT |
| 5102 | P06005102 | SPACER |
| 5103 | P06005103 | SPECIAL SCREW |
| 5104 | P06005104 | SPECIAL SCREW |
| 5105 | P06005105 | GEAR 57T X 2.25 |
| 5106 | P06005106 | EXT RETAINING RING 47MM |
| 5108 | P06005108 | GEAR 66T X 2.25 |
| 5109 | P06005109 | GEAR 57T X 2.25 |
| 5110 | P06005110 | GEAR 42T X 2.25 |
| 5111 | P06005111 | SPACER |
| 5112 | P06005112 | GEAR 57T X 2.25 |
| 5113 | P06005113 | GEAR 57T X 2.25 |
| 5114 | PR09M | EXT RETAINING RING 20MM |
| 5115 | P06005115 | STUD |
| 5116 | P06005116 | THREADING PLATE |
| 5117 | PS05M | PHLP HD SCR M5-.8 X 8 |
| 5118 | P06005118 | BED GAP |
| 5119 | PSB73M | CAP SCREW M12-1.75 X 50 |
| 5120 | P06005120 | BOLT PIN 10 X 75MM |
| 5121 | PN02M | HEX NUT M10-1.5 |
| 5122 | PSB47M | CAP SCREW M10-1.5 X 40 |
| 5123 | PSB01M | CAP SCREW M6-1 X 16 |
| 5124 | P06005124 | BRACKET |
| 5125 | P06005125 | BRACKET |
| 5126 | PSS19M | SET SCREW M8-1.25 X 30 |
| 5127 | PN03M | HEX NUT M8-1.25 |
| 5128 | P06005128 | FEMALE KNOB M8-1.25 |
| 5129 | P06005129 | BUSHING |
| 5130 | P06005130 | OIL PLUG |
| 5131 | PS05M | PHLP HD SCR M5-.8 X 8 |
| 5132 | P06005132 | COVER |
| 5133 | PSS03M | SET SCREW M6-1 X 8 |
| 5134 | PSB68M | CAP SCREW M6-1 X 8 |
| 5135 | PSB48M | CAP SCREW M6-1 X 35 |
| 5136 | P06005136 | LEVER |
| 5137 | P06005137 | GUIDE PIN |
| 5138 | P06005138 | LOCK WASHER |

| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 5139 | P06005139 | COMPRESSION SPRING |
| 5140 | P06005140 | BUSHING |
| 5141 | PSB14M | CAP SCREW M8-1.25 X 20 |
| 5142 | P06005142 | CAP SCREW M16-2 X 55 |
| 5143 | PLW10M | LOCK WASHER 16MM |
| 5144 | P06005144 | WARNING PLATE |
| 5145 | P06005145 | THREADING CHART PLATE |
| 5146 | PLW10M | LOCK WASHER 16MM |
| 5147 | PSS03M | SET SCREW M6-1 X 8 |
| 5148 | PSB26M | CAP SCREW M6-1 X 12 |
| 5149 | PS09M | PHLP HD SCR M5-.8 X 10 |
| 5150 | PSB01M | CAP SCREW M6-1 X 16 |
| 5151 | PSB14M | CAP SCREW M8-1.25 X 20 |
| 5152 | PN02M | HEX NUT M10-1.5 |
| 5153 | PSB64M | CAP SCREW M10-1.5 X 25 |
| 5154 | PSB01M | CAP SCREW M6-1 X 16 |
| 5155 | P06005155 | SHAFT |
| 5156 | PLW06M | LOCK WASHER 10MM |
| 5157 | PSB47M | CAP SCREW M10-1.5 X 40 |
| 5158 | PS03M | PHLP HD SCR M6-1 X 8 |
| 5159 | PRP28M | ROLL PIN 5 X 40MM |
| 5160 | PSB26M | CAP SCREW M6-1 X 12 |
| 5161 | PLW06M | LOCK WASHER 10MM |
| 5162 | PSB13M | CAP SCREW M8-1.25 X 30 |
| 5163 | PRP42M | ROLL PIN 3 X 20MM |
| 5164 | PN03M | HEX NUT M8-1.25 |
| 5165 | PLW04M | BELT BRAKE |
| 5166 | PSB13M | CAP SCREW M8-1.25 X 30 |
| 5167 | P06005167 | SCREEN |
| 5168 | P06005168 | COOLANT PUMP BASE |
| 5169 | P06005169 | CAM |
| 5170 | PSB26M | CAP SCREW M6-1 X 12 |
| 5171 | P06005171 | BLOCK |
| 5172 | PSB06M | CAP SCREW M6-1 X 25 |
| 5173 | P06005173 | BLOCK |
| 5174 | P06005174 | STAR TYPE RING |
| 5175 | P06005175 | PUMP COVER |
| 5176 | P06005176 | 3-JAW CHUCK |



Steady and Follow Rests

(6000 Series Parts)



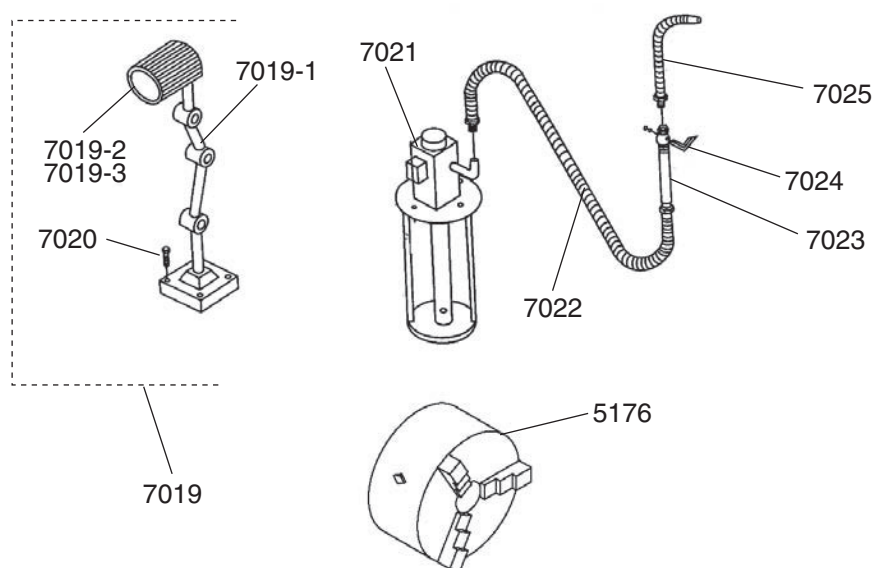
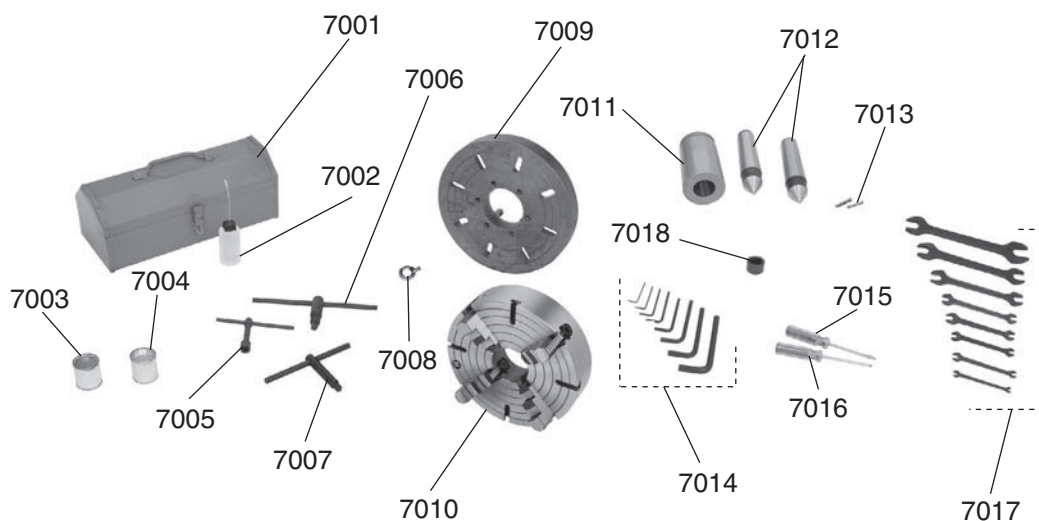
| REF | PART # | DESCRIPTION |
|------|-----------|------------------------|
| 6001 | P06006001 | CLAMPING BRACKET |
| 6002 | P06006002 | HEX BOLT M20-2.5 X 110 |
| 6003 | P06006003 | SPECIAL NUT M20-1.5 |
| 6004 | PLW07M | LOCK WASHER 20MM |
| 6005 | P06006005 | STEADY REST BASE |
| 6006 | P06006006 | LIMIT SCREW |
| 6007 | P06006007 | DOWEL PIN 10 X 60MM |
| 6008 | P06006008 | BALL BEARING 180300 |
| 6009 | P06006009 | GUIDE PIN |
| 6010 | P06006010 | SUPPORT SHAFT |
| 6011 | PSB68M | CAP SCREW M6-1 X 8 |
| 6012 | P06006012 | SLEEVE |
| 6013 | P06006013 | SHAFT |
| 6014 | P06006014 | UPPER CASTING |
| 6015 | PRP30M | ROLL PIN 5 X 50MM |
| 6016 | P06006016 | BUSHING |

| REF | PART # | DESCRIPTION |
|------|-----------|-----------------------|
| 6017 | P06006017 | ADJUSTMENT KNOB |
| 6018 | PSS03M | SET SCREW M6-1 X 8 |
| 6019 | P06006019 | LOCK KNOB |
| 6020 | P06006020 | CLAMP SCREW |
| 6021 | P06006021 | DOWEL PIN 10 X 60MM |
| 6022 | P06006022 | ROTATE HANDLE |
| 6023 | PRP26M | ROLL PIN 5 X 26MM |
| 6024 | P06006024 | FOLLOW REST |
| 6025 | P06006025 | LIMIT SCREW |
| 6026 | P06006026 | BRACKET |
| 6027 | P06006027 | SLEEVE |
| 6028 | P06006028 | BUSHING |
| 6029 | P06006029 | SPECIAL SCREW |
| 6030 | P06006030 | SHAFT |
| 6031 | PB31M | HEX BOLT M10-1.5 X 40 |
| 6032 | PLW06M | LOCK WASHER 10MM |



Accessories, Coolant, and Lighting System

(7000 Series Parts)



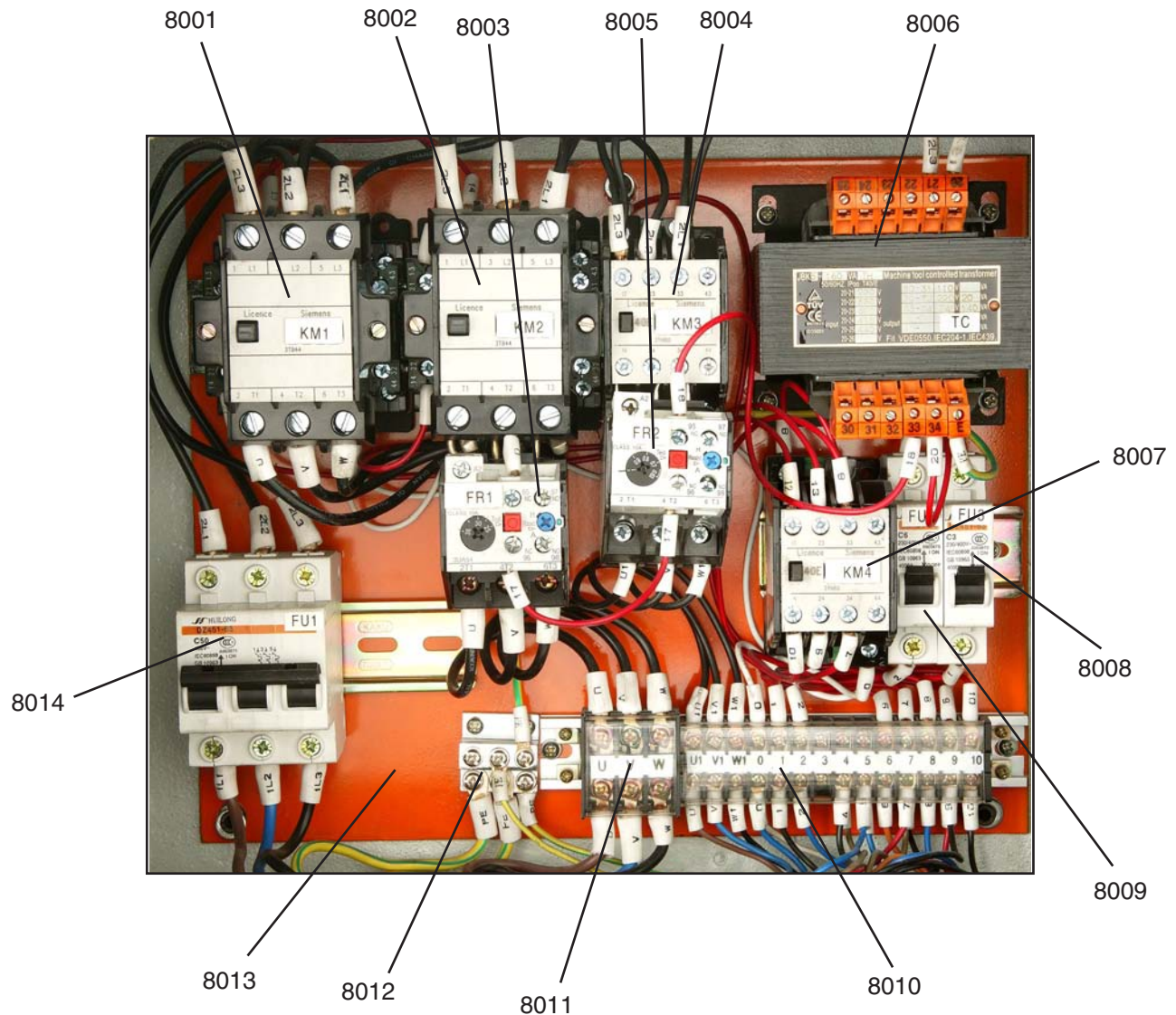
| REF | PART # | DESCRIPTION |
|------|-----------|-------------------------------|
| 7001 | P06007001 | TOOL BOX |
| 7002 | P06007002 | OIL BOTTLE |
| 7003 | P06007003 | GREEN SPOT PAINT |
| 7004 | P06007004 | PUTTY SPOT PAINT |
| 7005 | P06007005 | TOOL POST WRENCH |
| 7006 | P06007006 | 4-JAW CHUCK WRENCH |
| 7007 | P06007007 | 3-JAW CHUCK WRENCH |
| 7008 | P06007008 | 4-JAW CHUCK LIFT EYE |
| 7009 | P06007009 | 18" FACE PLATE |
| 7010 | P06007010 | 4-JAW CHUCK |
| 7011 | P06007011 | MT#7-5 TAPERED SPINDLE SLEEVE |
| 7012 | P06007012 | MT#5 DEAD CENTER |
| 7013 | P06007013 | FEED ROD/LEAD SCREW SHEAR PIN |
| 7014 | P06007014 | HEX WRENCH SET 1.5-10 |

| REF | PART # | DESCRIPTION |
|--------|-------------|--------------------------|
| 7015 | P06007015 | #2 STANDARD SCREW DRIVER |
| 7016 | P06007016 | #2 PHILLIPS SCREW DRIVER |
| 7017 | P06007017 | COMBO WRENCH SET 6-30 |
| 7018 | P06007018 | GAP PULLER HUB |
| 7019 | P06007019 | LAMP ASSEMBLY |
| 7019-1 | P06007019-1 | BASE AND ARM ASSEMBLY |
| 7019-2 | P06007019-2 | LENSE |
| 7019-3 | P06007019-3 | BULB 24V-50W |
| 7020 | PSB06M | CAP SCREW M6-1 X 25 |
| 7021 | P06007021 | MOTOR AND PUMP ASSY |
| 7022 | P06007022 | SUPPLY FLEX TUBE |
| 7023 | P06007023 | STANDOFF PIPE |
| 7024 | P06007024 | FLOW VALVE |
| 7025 | P06007025 | NOZZLE AND FLEX TUBE |



Main Electrical Box

(8000 Series Parts)



| REF | PART # | DESCRIPTION |
|------|-----------|------------------------------|
| 8001 | P06008001 | CONTACTOR (3TB44) |
| 8002 | P06008002 | CONTACTOR (3TB44) |
| 8003 | P06008003 | THERMAL RELAY (SETTING: 32A) |
| 8004 | P06008004 | CONTACTOR (40E, 3TH80) |
| 8005 | P06008005 | THERMAL RELAY (SETTING: 1A) |
| 8006 | P06008006 | TRANSFORMER (JBK50160-VATH) |
| 8007 | P06008007 | CONTACTOR (40E, 3TH80) |
| 8008 | P06008008 | CIRCUIT BREAKER (3A, 400VAC) |

| REF | PART # | DESCRIPTION |
|------|-----------|--------------------------------------|
| 8009 | P06008009 | CIRCUIT BREAKER (6A, 400VAC) |
| 8010 | P06008010 | MAIN TERMINAL BOARD |
| 8011 | P06008011 | MOTOR TERMINAL BOARD |
| 8012 | P06008012 | GROUND TERMINAL BOARD |
| 8013 | P06008013 | MOUNTING PANEL |
| 8014 | P06008014 | MASTER CIRCUIT BREAKER (50A, 400VAC) |



WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.





WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

*The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.***

1. How did you learn about us?

_____ Advertisement

_____ Friend

_____ Catalog

_____ Card Deck

_____ Website

_____ Other:

2. Which of the following magazines do you subscribe to?

_____ Cabinetmaker & FDM

_____ Popular Science

_____ Wooden Boat

_____ Family Handyman

_____ Popular Woodworking

_____ Woodshop News

_____ Hand Loader

_____ Precision Shooter

_____ Woodsmith

_____ Handy

_____ Projects in Metal

_____ Woodwork

_____ Home Shop Machinist

_____ RC Modeler

_____ Woodworker West

_____ Journal of Light Cont.

_____ Rifle

_____ Woodworker's Journal

_____ Live Steam

_____ Shop Notes

_____ Other:

_____ Model Airplane News

_____ Shotgun News

_____ Old House Journal

_____ Today's Homeowner

_____ Popular Mechanics

_____ Wood

3. What is your annual household income?

_____ \$20,000-\$29,000

_____ \$30,000-\$39,000

_____ \$40,000-\$49,000

_____ \$50,000-\$59,000

_____ \$60,000-\$69,000

_____ \$70,000+

4. What is your age group?

_____ 20-29

_____ 30-39

_____ 40-49

_____ 50-59

_____ 60-69

_____ 70+

5. How long have you been a woodworker/metalworker?

_____ 0-2 Years

_____ 2-8 Years

_____ 8-20 Years

_____ 20+ Years

6. How many of your machines or tools are Grizzly?

_____ 0-2

_____ 3-5

_____ 6-9

_____ 10+

7. Do you think your machine represents a good value?

_____ Yes

_____ No

8. Would you recommend Grizzly Industrial to a friend?

_____ Yes

_____ No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?

Note: *We never use names more than 3 times.*

_____ Yes

_____ No

10. Comments: _____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE



Place
Stamp
Here



GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069



FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

| |
|-----------------------------|
| Name_____ |
| Street_____ |
| City_____State_____Zip_____ |

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

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